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11 UNITED STATES DISTRICT COURT  
12 NORTHERN DISTRICT OF CALIFORNIA  
13 SAN FRANCISCO DIVISION  
14

15 IN RE SEAGATE TECHNOLOGY, LLC  
16 LITIGATION

17 CONSOLIDATED ACTION  
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Case No. 3:16-cv-00523 JCS

**DECLARATION OF LIÊN PAYNE IN  
SUPPORT OF SEAGATE'S OPPOSITION  
TO PLAINTIFFS' MOTION FOR CLASS  
CERTIFICATION**

Judge: Hon. Joseph C. Spero  
Date: March 30, 2018  
Time: 9:30 a.m.  
Dept.: Courtroom G

Filed Concurrently with DEFENDANT  
SEAGATE TECHNOLOGY LLC'S  
OPPOSITION TO MOTION FOR CLASS  
CERTIFICATION

1 I, Liên Payne, declare as follows:

2 1. I am an attorney duly admitted to practice before this Court. I am an  
3 associate with the law firm of Sheppard, Mullin, Richter & Hampton LLP, counsel of record for  
4 Defendant Seagate Technology LLC ("Seagate"). I have personal knowledge of the facts set forth  
5 in this declaration, and, if called as a witness, could and would competently testify to their truth.

6 2. In their Motion for Class Certification, Plaintiffs claim that Seagate  
7 "ubiquitously" advertised Annualized Failure Rates ("AFRs") for the products containing the  
8 ST3000DM001 hard drive (the "Drive") and advertised a combined AFR of "0.34%, <1%" at one  
9 point. Motion, 6:22–7:16. Plaintiffs specifically state the following:

10 i. "These drives were first released around April 2011... [t]he product  
11 manual, always available on Seagate's website, stated that these drives had an AFR of 0.34%."  
12 Motion 6:22–7:1; *see also* Hospodor Decl., ¶¶ 48 – 49.

13 ii. "By November 2011, Seagate released a data sheet for the drives  
14 (downloadable on its website) which also listed the AFR as <1%." Motion, 7:2–3; *see also*  
15 Hospodor Decl., ¶¶ 51–52.

16 iii. "From April 2012 to at least January 2013, Seagate modified its  
17 website to reflect an AFR of "0.34%, <1%." Motion, 7:1– 2; *see also* Hospodor Decl. ¶¶ 53–54.

18 3. In his declaration, Hospodor also states: "[After January 2013] [t]he AFR  
19 specification was thereafter removed from the website for a brief period, only to return in  
20 September 2013 as '0.34%.' The AFR specification remained on the website until at least January  
21 2014." Hospodor Decl., ¶ 54.

22 4. To investigate Plaintiffs' and Hospodor's assertions regarding Seagate's  
23 publication of AFRs for products containing the ST3000DM001, I oversaw a review of Seagate's  
24 historical webpages (referred to as "product detail webpages") for the following products:  
25 Barracuda, Desktop HDD Internal Kit, GoFlex Desk for Mac, FreeAgent Desktop, FreeAgent  
26 Home, Expansion Desk, and Expansion Desk Plus. The Barracuda and Desktop HDD Internal Kit  
27 are internal products ("Internal Products"). The GoFlex Desk for Mac, FreeAgent Desktop,  
28

1 FreeAgent Home, Expansion Desk, and Expansion Desk Plus are external products ("External  
2 Products").

3           5.       The review of product detail webpages was targeted to the three specific  
4 time frames during which Plaintiffs and Hospodor claimed Seagate published AFRs for products  
5 containing the Drives: April – November 2011, April 2012 – January 2013, and September 2013 –  
6 January 2014. *See* Paragraphs 2-3, above.

7           6.       To perform this research, I used the Wayback Machine, which is a service  
8 provided by the Internet Archive. I used the Wayback Machine because Seagate does not keep  
9 archives of its webpages. The Wayback Machine allows visitors to search archived webpages  
10 using URLs (i.e. a website address). If archived records for a particular URL are available, the  
11 Wayback Machine will show visitors the dates on which the page was archived and allow the  
12 visitor to view the archived pages.

13           7.       I enlisted the assistance of a paralegal and a contract attorney to: (1) review  
14 each available archived URL of Seagate's website during the time frames set forth above, and (2)  
15 record whether an AFR was available on the data sheet (if available), product manual (if  
16 available), and specifications tab (if available), related to each product. I quality-controlled their  
17 work and found no errors.

18           8.       The review of Seagate's archived webpages included a review of the  
19 archived webpages Hospodor cites in his declaration at footnotes 22, 23, 26, and 27, upon which  
20 Plaintiffs rely for their assertions in quoted in paragraph 2, above. As shown below, Seagate did  
21 not ubiquitously or even consistently publish the AFRs for Internal Products in the materials  
22 available on its website during the time frames cited by Plaintiffs. Moreover, Plaintiffs proffered  
23 no evidence showing that Seagate ever published AFRs for External Products. Finally, Plaintiffs  
24 misinterpret the AFR of "0.34%, <1%" published on Seagate's webpage as specific to the Internal  
25 Products; this AFR in fact covered a wide range of products also included on the same webpage  
26 during the referenced time frame. The downloadable data sheets specific to the Internal Products  
27 show that those the data sheets contained a <1% AFR representation at that time.  
28

**Earliest AFR Representations Available on Seagate's Website for the Internal Products**

9. The results of our Wayback Machine research are as follows: No representations regarding the 3TB Internal Products were available on Seagate's website before October 23, 2011 at the earliest.

10. At some point between October 23 and October 31, 2011, Seagate published specifications regarding the Internal Products on its marketing pages for the products (also referred to as "product detail pages"). As of October 31, 2011, the specifications tab and downloadable data sheets available through the product detail pages for the Internal Products contained a <1% AFR. This means that class members who purchased the Internal Products prior to October 31, 2011 would not have had access to an AFR specification through the webpages Plaintiffs cite.

11. Product manuals for the Internal Products did not become available on Seagate's marketing webpages until June 26, 2012 at the earliest.

**Combined AFR Representations For Internal Products Between April 2012 and January 2013**

12. According to the archived webpages available on the Wayback Machine, data sheets for the Internal Products available on Seagate's website from April 28, 2012 through January 17, 2013 only included an AFR representation of <1% for 2400 POH.<sup>1</sup> None included an AFR representation of 0.34%. This confirms that the "0.34%, 1%" combined AFR representation cited by Plaintiffs was not specific to the Internal Products. No product manuals included an AFR representation.

13. As examples, Exhibits 26 and 27 are true and correct copies of data sheets obtained through the Wayback Machine that were available for download from Seagate's webpage for the Barracuda on April 28, 2012 and January 17, 2013, respectively.

<sup>1</sup> POH means "Power On Hours." Power on Hours is a specification of the amount of time a hard drive is estimated to be in use per year. 2400 POH would be approximately 40 hours/week.

**AFR Representations on Seagate's Website for External Products**

14. According to the archived webpages available on the Wayback Machine, Seagate did not publish any AFRs for the External Products for the three time frames referred to by Plaintiffs and Hospodor and set forth in Paragraph 5, above.

**Documents**

15. Attached hereto are true and correct copies of the following exhibits:

Exhibit 1: Document Bates-numbered FED\_SEAG0026679, produced in the above-captioned matter by Seagate.

Exhibit 2: Document Bates-numbered FED\_SEAG0026839, produced in the above-captioned matter by Seagate.

Exhibit 3: Document Bates-numbered FED\_SEAG0026867, produced in the above-captioned matter by Seagate.

Exhibit 4: Document Bates-numbered FED\_SEAG0026751, produced in the above-captioned matter by Seagate.

Exhibit 5: Document Bates-numbered FED\_SEAG0057277, produced in the above-captioned matter by Seagate.

Exhibit 6: Document Bates-numbered FED\_SEAG0056259, produced in the above-captioned matter by Seagate.

Exhibit 7: Document Bates-numbered FED\_SEAG0008927, reproduced as FED\_SEAG0054950, produced in the above-captioned matter by Seagate.

Exhibit 8: Document Bates-numbered FED\_SEAG0055094, produced in the above-captioned matter by Seagate.

Exhibit 9: Document Bates-numbered FED\_SEAG0009670, produced in the above-captioned matter by Seagate.

Exhibit 10: Document Bates-numbered FED\_SEAG0071085, produced in the above-captioned matter by Seagate.

1 Exhibit 11: Excerpts from the Deposition of Andrew Hospodor, taken in the  
2 above-captioned matter on December 15, 2017 by Seagate.

3 Exhibit 12: Excerpts from the Deposition of Pat Dewey, taken in the above-  
4 captioned matter on September 7, 2017 by Seagate.

5 Exhibit 13: Excerpts from the Deposition of Glen Almgren, taken in the above-  
6 captioned matter on July 26, 2017 by Seagate.

7 Exhibit 14: Excerpt from the Deposition of Andrew Khurshudov Deposition, taken  
8 in the above-captioned matter on September 8, 2017 by Seagate.

9 Exhibit 15: Document Bates-numbered FED\_SEAG0002320, produced in the  
10 above-captioned matter by Seagate.

11 Exhibit 16: Document Bates-numbered FED\_SEAG0009095, produced in the  
12 above-captioned matter by Seagate.

13 Exhibit 17: Declaration of Dave Rollings In Support of Defendant Seagate's  
14 Opposition to Plaintiffs' Motion for Class Certification, *Pozar v. Seagate Technology LLC*, No.  
15 CGC-15-547787.

16 Exhibit 18: Declaration of Seknam "Allen" Ng In Support of Defendant Seagate's  
17 Opposition to Plaintiffs' Motion for Class Certification, *Pozar v. Seagate Technology LLC*, No.  
18 CGC-15-547787.

19 Exhibit 19: Document Bates-numbered FED\_SEAG0026135, produced in the  
20 above-captioned matter by Seagate.

21 Exhibit 20: Document Bates-numbered FED\_SEAG0026244, produced in the  
22 above-captioned matter by Seagate.

23 Exhibit 21: Document Bates-numbered FED\_SEAG0009883, produced in the  
24 above-captioned matter by Seagate.

25 Exhibit 22: Excerpts from the Deposition of Nikolas Manak, taken in the above-  
26 captioned matter on June 20, 2017.

27 Exhibit 23: Excerpts from the Deposition of Stefan Boedeker, taken in the above-  
28 captioned matter on December 12, 2017.

1 Exhibit 24: Excerpts from the Deposition of Dennis Crawford, taken in the above-  
2 captioned matter on June 15, 2017.

3 Exhibit 25: 50-State Survey of Consumer Protection Statutes prepared by  
4 Sheppard Mullin.

5 Exhibit 26: April 28, 2012 data sheet downloaded from the Wayback Machine at  
6 [https://web.archive.org/web/20120428124406/http://www.seagate.com:80/internal-hard-](https://web.archive.org/web/20120428124406/http://www.seagate.com:80/internal-hard-drives/desktop-hard-drives/)  
7 [drives/desktop-hard-drives/](https://web.archive.org/web/20120428124406/http://www.seagate.com:80/internal-hard-drives/desktop-hard-drives/).

8 Exhibit 27: January 17, 2013 data sheet downloaded from the Wayback Machine at  
9 [https://web.archive.org/web/20130117005718/http://www.seagate.com/internal-hard-](https://web.archive.org/web/20130117005718/http://www.seagate.com/internal-hard-drives/desktop-hard-drives/)  
10 [drives/desktop-hard-drives/](https://web.archive.org/web/20130117005718/http://www.seagate.com/internal-hard-drives/desktop-hard-drives/).

11 Exhibit 28: Excerpts from the Deposition of David Shechner, taken in the above-  
12 captioned matter on June 6, 2017.

13 Exhibit 29: Excerpts from the Deposition of Christopher Nelson, taken in the  
14 above-captioned matter on June 2, 2017.

15 Exhibit 30: Excerpts from the Deposition of James Hagey, taken in the above-  
16 captioned matter on July 24, 2017.

17 Exhibit 31: Order Granting in Part Plaintiffs' Motion for Class Certification, *Pozar*  
18 *v. Seagate Technology LLC*, No. CGC-15-547787 (S.F. Super. Ct. Nov. 1, 2017)).

19 Executed on this 5th day of January, 2018, at San Francisco, California.  
20

21   
22  
23 Lien Payne



# **EXHIBIT 1**

**[FILED UNDER SEAL]**



**EXHIBIT 2**  
[FILED UNDER SEAL]

**EXHIBIT 3**  
[FILED UNDER SEAL]

**EXHIBIT 4**  
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**EXHIBIT 5**  
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**EXHIBIT 6**  
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**EXHIBIT 7**  
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**EXHIBIT 8**  
[FILED UNDER SEAL]



**EXHIBIT 9**  
[FILED UNDER SEAL]

# **EXHIBIT 10**

**[FILED UNDER SEAL]**

# **EXHIBIT 11**

1 UNITED STATES DISTRICT COURT  
2 NORTHERN DISTRICT OF CALIFORNIA  
3 SAN FRANCISCO DIVISION  
4

5 IN RE SEAGATE TECHNOLOGY, LLC  
6 LITIGATION,

\_\_\_\_\_ No. 3:16-cv-00523 JCS

7 CONSOLIDATED ACTION  
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9 \_\_\_\_\_

10 HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY  
11

12 Videotape Deposition of Andrew Hospodor,  
13 Ph.D., taken at Four Embarcadero Center, 17th  
14 Floor, San Francisco, California, on Friday,  
15 December 15, 2017 at 9:48 a.m.  
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22 REPORTED BY:

23 Mary Hogan CSR No. 05386  
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1 MS. SCARLETT: Objection to form.

2 Q (By Ms. Rodewald) Do you know the  
3 serial number of the drive?

4 MS. SCARLETT: Objection, form.

5 THE WITNESS: Not off the top my head.  
6 I haven't memorized it.

7 Q (By Ms. Rodewald) In this action, in  
8 your report, your declaration, you do not opine  
9 that the ST3000DM001 drives had any specific  
10 defect, do you?

11 MS. SCARLETT: Objection to form.

12 THE WITNESS: In my report I provide  
13 exemplary information of a number of different  
14 defects.

15 Q (By Ms. Rodewald) Did you identify any  
16 specific defect that you opine is common to the  
17 ST3000DM001 drives at issue in this litigation?

18 MS. SCARLETT: Objection to form.

19 THE WITNESS: So my role in this was  
20 not to identify a common defect.

21 There certainly are things that appear  
22 over and over again as issues in the production of  
23 the Seagate ST drives.

24 My role here was to identify whether  
25 or not the annualized failure rates, or AFR, was

1 actually within Seagate's claim of being less than  
2 1 percent or less than .3 percent as they  
3 advertised in their marketing materials.

4 Q (By Ms. Rodewald) What percentage of ST  
5 drives sold to consumers failed?

6 MS. SCARLETT: Objection to form.

7 THE WITNESS: I don't know.

8 Q (By Ms. Rodewald) But it is your  
9 opinion that they had a higher failure rate than 1  
10 percent?

11 A The data that I've reviewed indicates  
12 that from the beginning of the production process  
13 Seagate knew that this drive had an annualized  
14 failure rate of more than .34 and more than  
15 1 percent.

16 Q Is it your opinion that the ST drives  
17 in consumers' hands failed at a higher rate than 1  
18 percent?

19 MS. SCARLETT: Objection to form.

20 THE WITNESS: So I don't -- I can't  
21 opine on what is in consumers' hands. I have not  
22 seen the data for consumers' hands.

23 Q (By Ms. Rodewald) Is it your opinion  
24 that the ST drives for the entire period from 2011  
25 to 2016 had the same failure rate?

1 MS. SCARLETT: Objection to form.

2 THE WITNESS: It is my opinion that  
3 they did not.

4 Q (By Ms. Rodewald) And what were the  
5 differences? Did the failure rate vary over time?

6 MS. SCARLETT: Objection to form.

7 THE WITNESS: During the time and the  
8 data that I examined, the failure rate was  
9 constantly increasing and it was above 1 percent.

10 Q (By Ms. Rodewald) What do you mean by  
11 "constantly increasing"?

12 A Let's go into my expert report and  
13 I'll show you. Please, let's do it.

14 Q Hold on. I think this is a very  
15 simple question.

16 A I wanted to answer you accurately.

17 Q When you say "constantly increasing,"  
18 do you mean that hard drives manufactured in 2014  
19 had a higher failure rate than hard drives  
20 manufactured in 2011?

21 A I'm going to answer you out of my  
22 expert report.

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1 report and flush them out, but I'm not sure off  
2 the top my head if the eight months is referring  
3 to the start of mass production for the -- for the  
4 SBS drives or the bare drives, so I -- I would  
5 have to go back and review my report to see that.

6 Q Okay.

7 A And I'm trying to answer you --

8 Q No.

9 A -- as factually as I can.

10 Q I understand. And we can look at some  
11 documents later, you know, later in the  
12 deposition.

13 I'm trying to get some general  
14 overview now and trying to understand some  
15 concepts, and then we'll go back and tie down some  
16 of these things.

17 Okay. Do you know what percentage of  
18 the named plaintiffs' drives failed?

19 MS. SCARLETT: Objection to form.

20 THE WITNESS: I'm sorry. The named  
21 plaintiffs being the parties who brought the suit?

22 Q (By Ms. Rodewald) Correct.

23 A I do not, but I can assume that they  
24 wouldn't bring suit unless their drives had  
25 failed.

1 Q But you don't know what percentage?

2 MS. SCARLETT: Objection, form.

3 THE WITNESS: I don't know how many  
4 drives they had, when they failed, or how many  
5 failed.

6 Q (By Ms. Rodewald) Okay. Do you want to  
7 go for a little further before we take a break?

8 A No. We can keep going.

9 Q Is it your understanding that in the  
10 hard drive industry hard drives are produced for  
11 different intended uses?

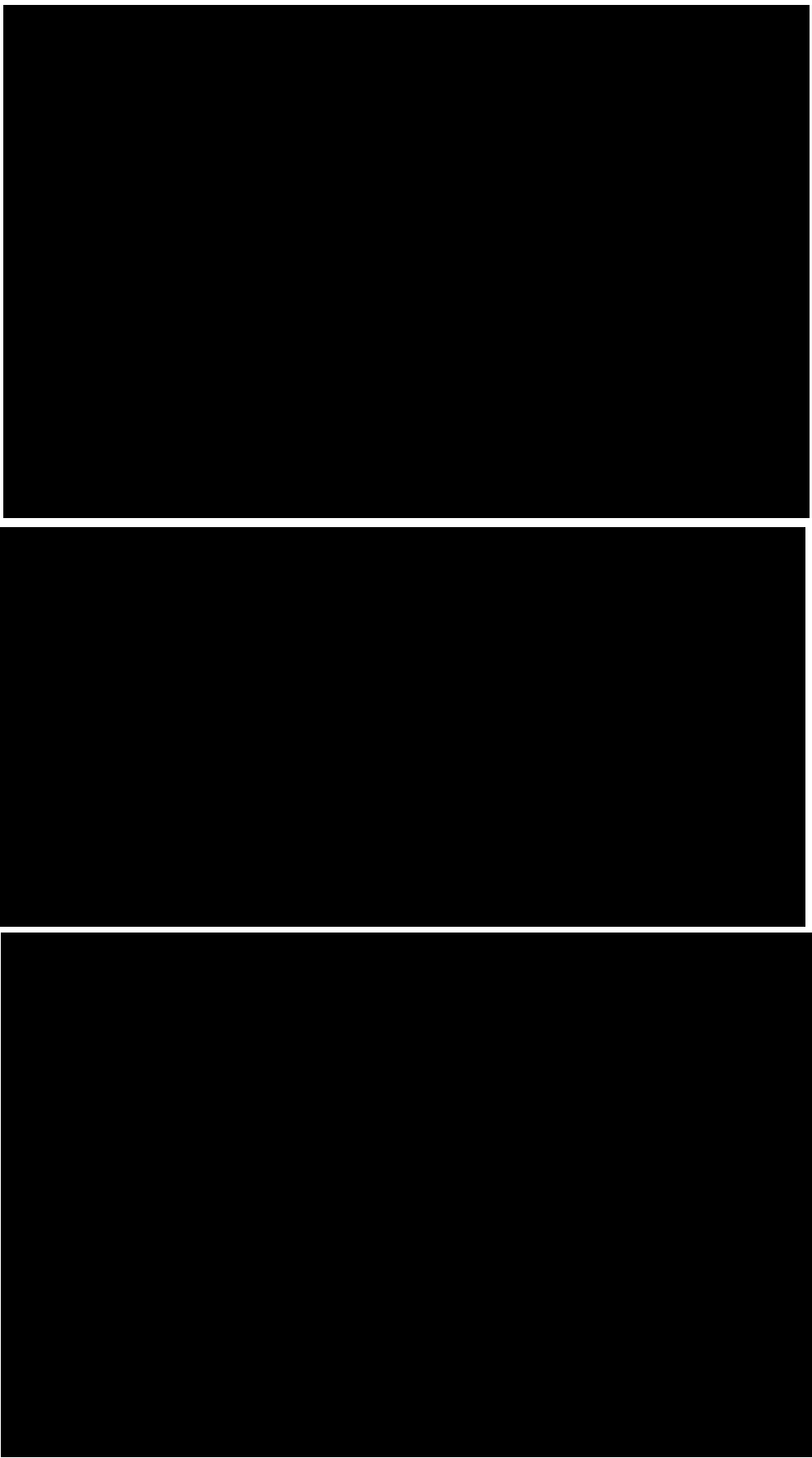
12 A So I'm -- I'm not really sure I  
13 understand what you're asking.

14 Q Well, let me ask you this: Do hard  
15 drive manufacturers such as Western Digital or  
16 Seagate or -- I forget Hitachi's current name.  
17 It's HG --

18 A -- ST.

19 Q HGST. Is it your understanding that  
20 they manufacture some hard drives to be used  
21 inside desktop computers, they manufacture other  
22 hard drives to be used in what are called  
23 enterprise or mission critical applications, and  
24 other hard drives to be used inside DVRs and  
25 TiVos, or to be used inside laptops?

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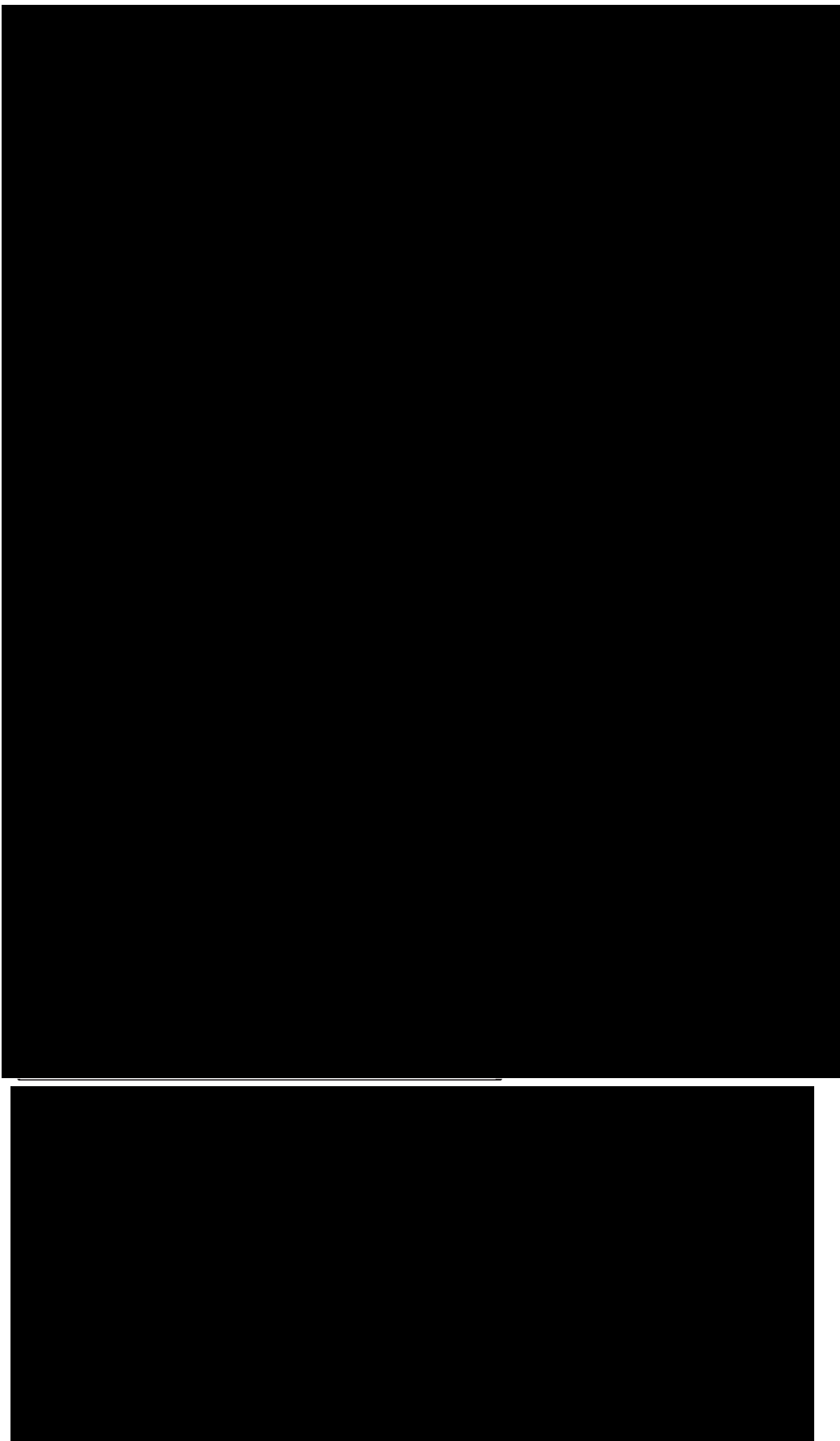
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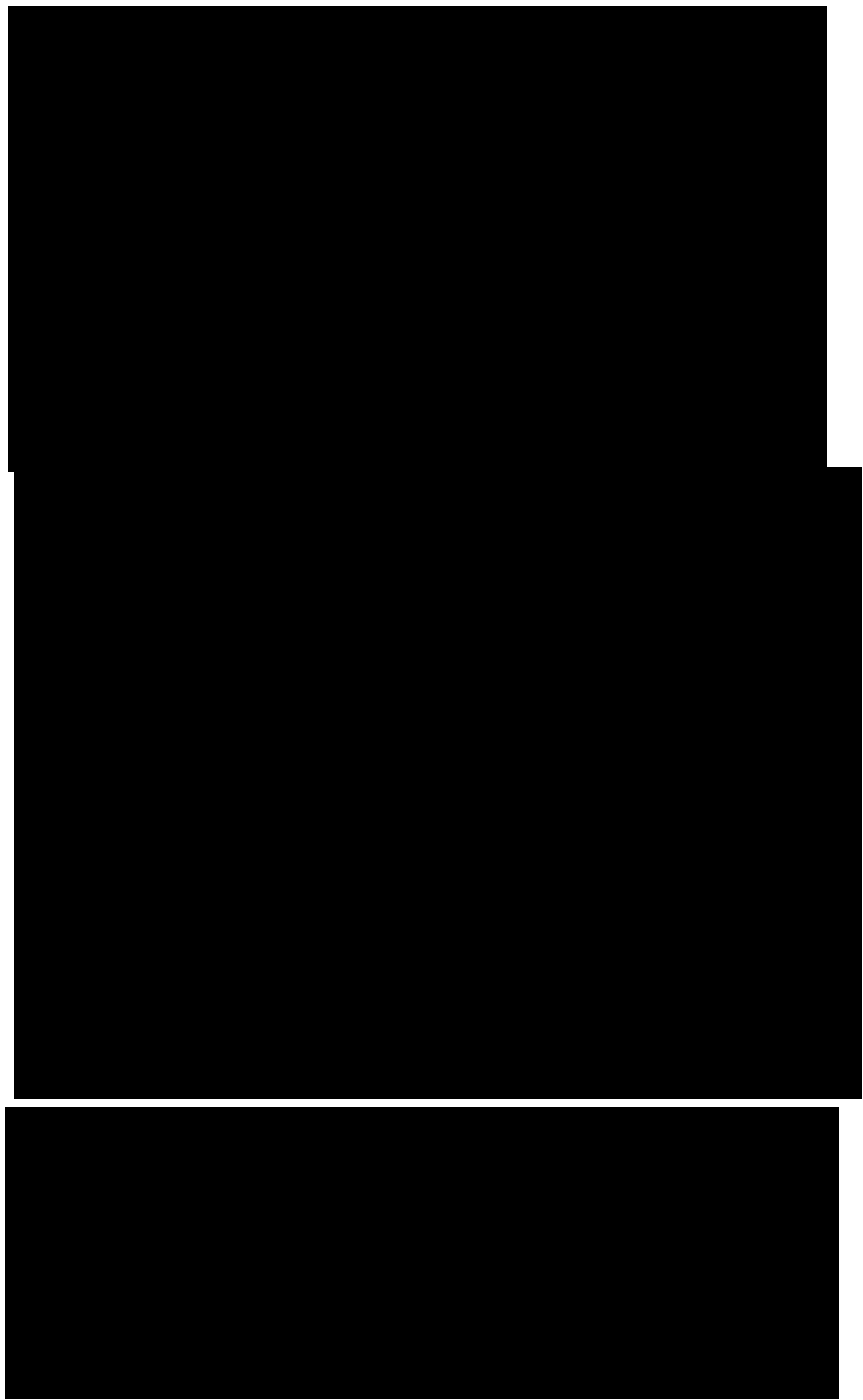




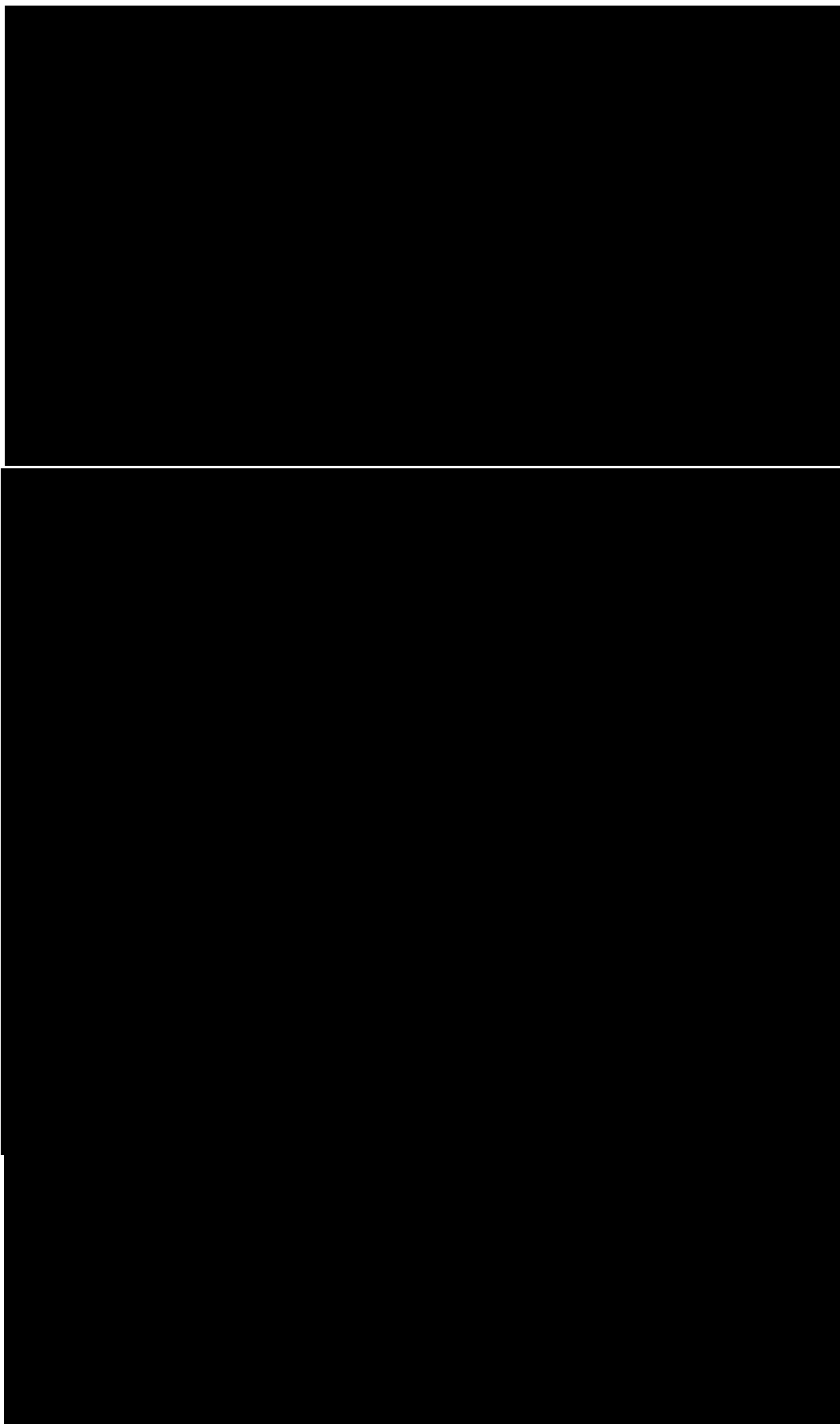
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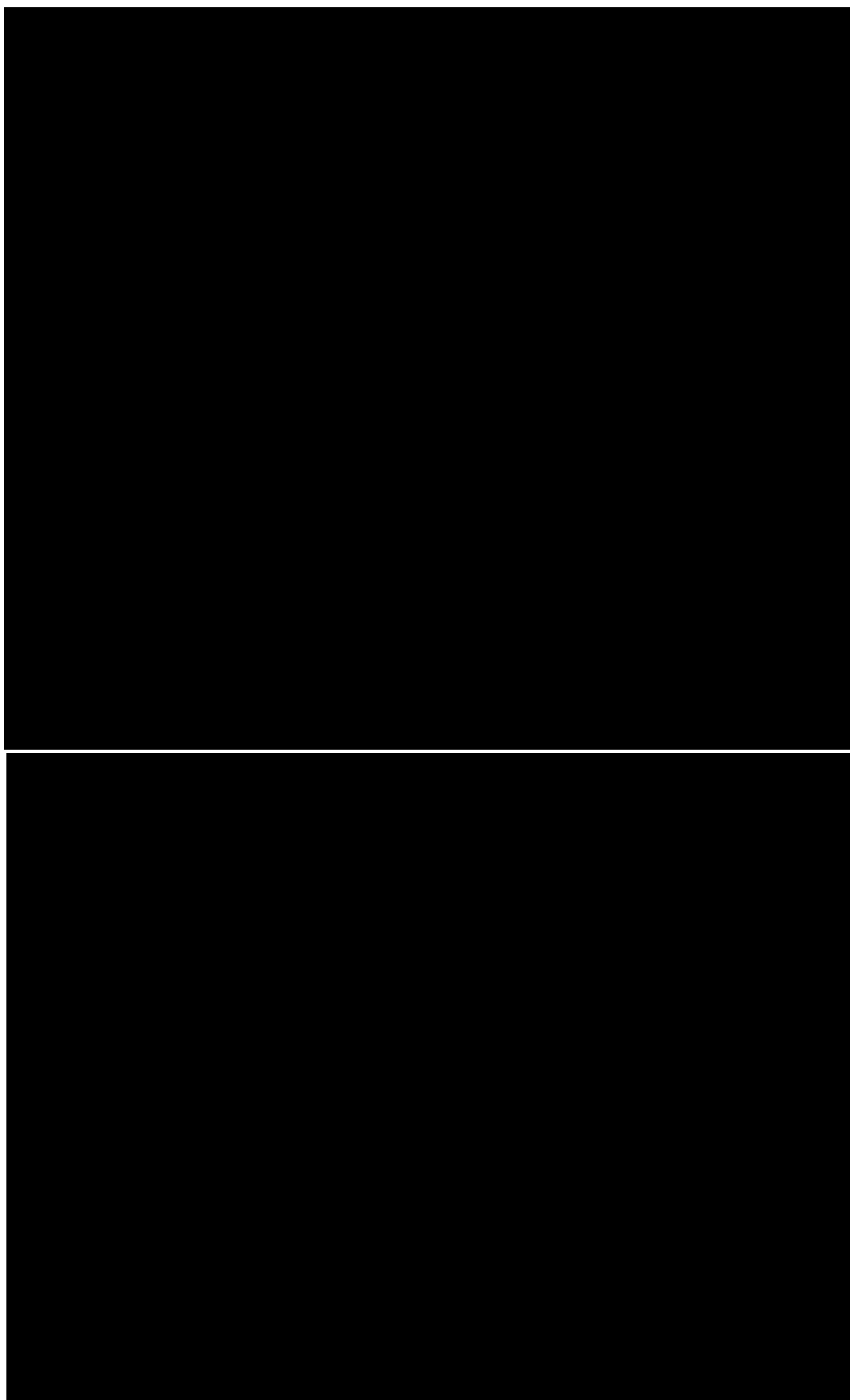
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1 phase referred to as pilot exit.

2 Q Okay.

3 A And accordingly, Seagate test drives  
4 pre-release, as well as post-release, so it's  
5 right there where the drive is released that  
6 Seagate will be collecting and analyzing field  
7 data to spot trend and determine whether a drive  
8 is meeting its anticipated rate of field returns.

9 Q So after this release it's your  
10 understanding that the drive is continued -- hard  
11 drive companies in general and Seagate included  
12 continue to put the drives through ongoing  
13 testing; is that correct?

14 A Yes.

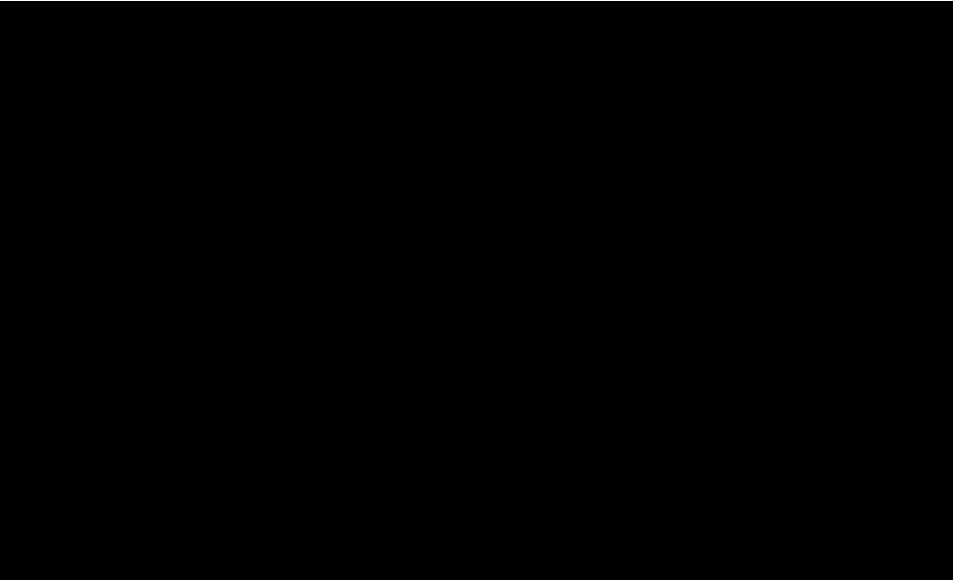
15 Q Okay. And is it your understanding  
16 that Seagate called that ongoing activity ongoing  
17 reliability testing or ORT?

18 MS. SCARLETT: Objection, form.

19 THE WITNESS: I have seen the term ORT  
20 and there may be some other testing that they've  
21 done as well.

22 Once the drive does go into  
23 manufacturing, it would typically use the same  
24 components that were qualified on the drive at the  
25 time it was being designed and before it was being

1 handed off from the pilot exit and the quality  
2 exit.



11 Q (By Ms. Rodewald) Have you ever been  
12 involved in the production of a hard drive that  
13 was produced in volume of millions?

14 A Yes.

15 Q And when was that?

16 A That was at Quantum.

17 Q Okay.

18 A In the 1980s -- sorry, 1990s as well.

19 Q And those being hard drive --  
20 particular models of the hard drives were being  
21 produced in millions of numbers a year?

22 A Yes.

23 Q And were those being produced at a  
24 number of factories in a number of different  
25 countries as well?



1           A       No. I believe we had one major  
2       manufacturing facility.

3           Q       Was it Quantum's practice at the time  
4       to qualify multiple sources for components?

5           A       Yes. Quantum would qualify multiple  
6       sources before the mass production of the drive  
7       began.

8           Q       Before they started ramping production  
9       they would qualify multiple sources?

10          A       Yes.

11          Q       And is it possible that a company  
12       would qualify multiple sources during the ramp  
13       phase?

14               MS. SCARLETT: Objection, form.

15               THE WITNESS: It not something that  
16       I've ever seen.

17          Q       (By Ms. Rodewald) How many drives have  
18       you been involved with taking from design through  
19       approval for sale through a ramp?

20          A       Dozens.

21          Q       And was that all at Quantum?

22          A       That was primarily at Quantum, and  
23       then I had also done consulting work where I  
24       assisted other disk drive companies.

25          Q       When was that?

1           A       In the back of my resume, I think it  
2 was '83 to '86. Let's see. It may have been  
3 earlier or later.

4                   So when I was at I/O Xel, '86 to 1990,  
5 and so I worked with companies like Quantum,  
6 Prium, Maxtor and Iomega and assisted them in  
7 taking their product through this process.

8           Q       And you were involved in qualifying  
9 component suppliers?

10          A       I actually at the time developed  
11 something called the SCSI benchmark tester and  
12 that was the first patent that I received, and  
13 these companies used the tester to evaluate some  
14 of the suppliers of some of their components.

15          Q       So you're saying that it's not -- it's  
16 not standard practice to continue qualifying new  
17 suppliers of parts during the ramp phase of  
18 production?

19                   MS. SCARLETT: Objection, form.

20                   THE WITNESS: I'm not familiar with  
21 that, and I would think it's somewhat dangerous.

22          Q       (By Ms. Rodewald) Why?

23          A       Because you're about to start building  
24 millions of things with parts that you don't  
25 really know very much about.

1 Q That's the purpose of the  
2 qualification process, isn't it?

3 MS. SCARLETT: Objection, form.

4 THE WITNESS: That's why I believe the  
5 qualification process should occur before the mass  
6 production.

7 Q (By Ms. Rodewald) During ongoing  
8 reliability testing or whatever you want to call  
9 it -- let me see.

10 Have you ever been involved in that  
11 process, the process of either doing or  
12 supervising, directly supervising, ongoing  
13 reliability testing?

14 A Yes.

15 MS. SCARLETT: Objection to form.

16 THE WITNESS: Sorry. Yes.

17 Q (By Ms. Rodewald) When was that?

18 A That was again at Quantum.

19 Q And can you please explain what your  
20 role was with regard to ongoing reliability  
21 testing?

22 A So at Quantum we were very interested  
23 in what the failure rates were, and my group in  
24 systems engineering was responsible, as I said,  
25 for drives that were targeted for streaming

1 Q Okay. So you're saying that  
2 head-related failures -- you are grouping them all  
3 together as being common; is that correct?

4 A No, that is not what I'm saying.

5 Q Okay. So why would it matter whether  
6 or not something is called a head-related failure?

7 It sounds to me like you're saying  
8 just because something is called a head-related  
9 failure you cannot make a conclusion one way or  
10 another whether it has anything in common with a  
11 different head-related failure; is that correct?

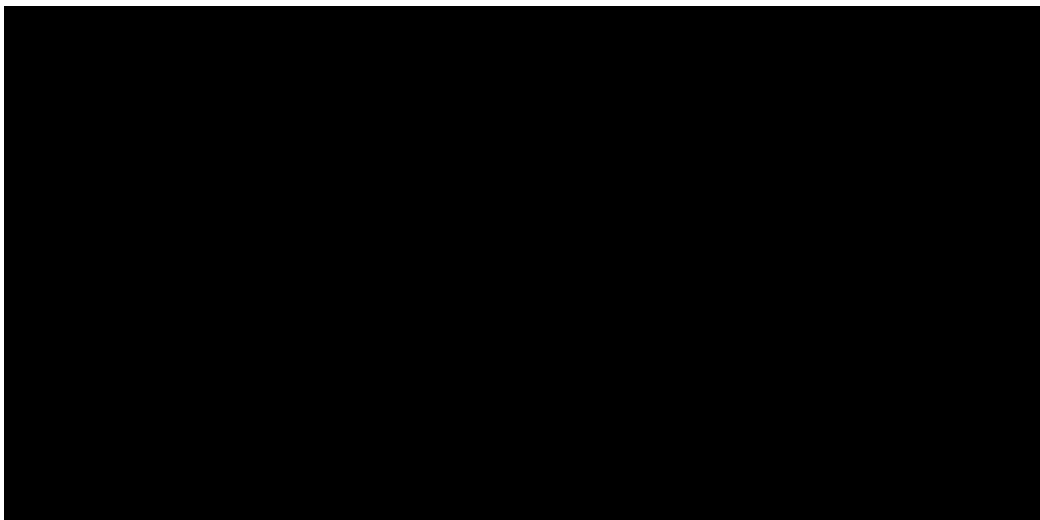
12 MS. SCARLETT: Objection, form.

13 THE WITNESS: Okay. So I didn't  
14 understand your first question and I definitely  
15 don't understand your second question.

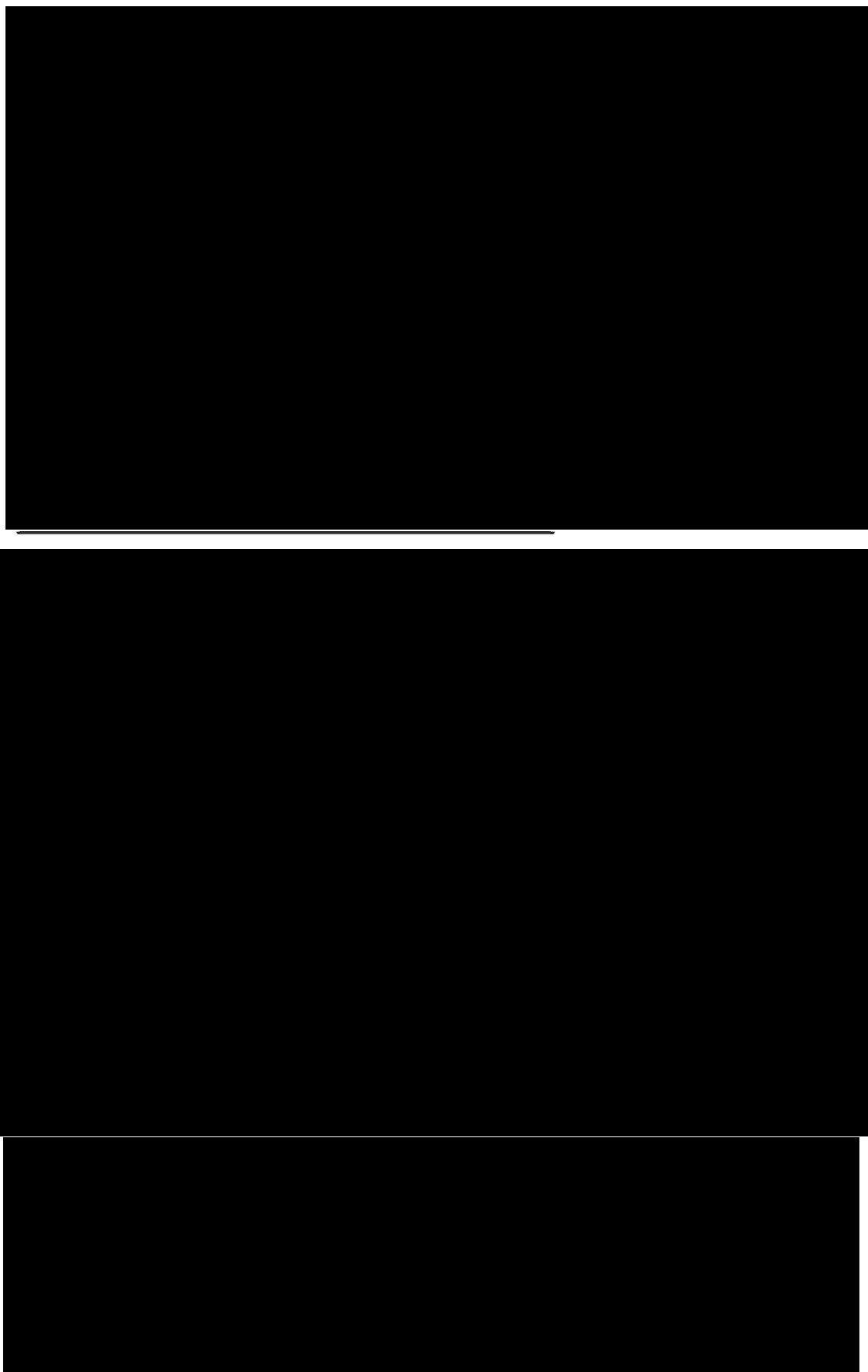
16 Q (By Ms. Rodewald) Okay.

17 A So if you could rephrase them for  
18 me --

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[REDACTED]

Seagate saw were somehow connected to each other?

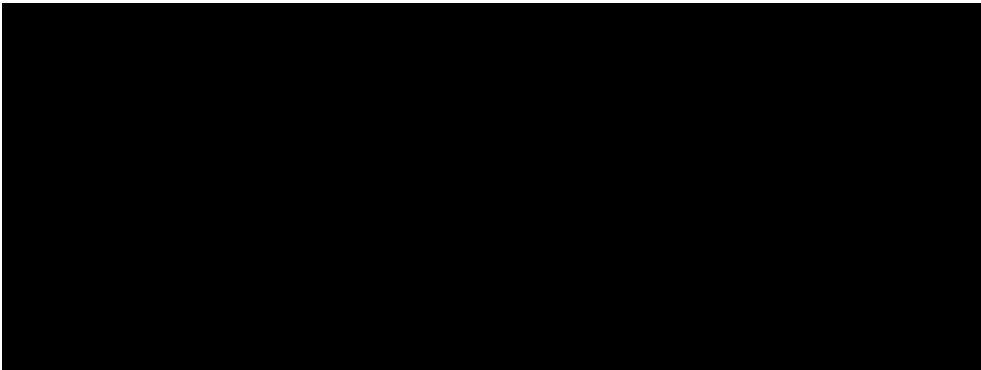
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Q What you reviewed -- you reviewed the documents Seagate produced; is that correct?

MS. SCARLETT: Objection, form.

THE WITNESS: I reviewed a lot of Seagate documents. Which are you talking about?

Q (By Ms. Rodewald) Why are you saying you don't have the data?

MS. SCARLETT: Objection to form.

THE WITNESS: Because I did not review any data based on customer failures in the file. Seagate did not produce that in this case.

Q (By Ms. Rodewald) So Paragraph 34, you go on to state, "The data used to calculate AFR and MTBF is usually obtained by conducting accelerated life testing equivalents of running a large population of drives 24 hours per day and seven days per week for at least 30 days in special test chambers which subject the drives to extreme conditions, such as temperature and voltage levels above and below the values listed



1 manufacturer and has their brand on it is that if  
2 they are manufacturing disk drives and their disk  
3 drives are either 2400 power-on hours or 8760  
4 power-on hours, that the disk drive that's inside  
5 the enclosure that I buy from them will either be  
6 2400 power-on hours per year or 8760 power-on  
7 hours per year.

8 I have never seen any piece of  
9 information that suggests that customers should  
10 only use their Seagate branded storage solutions  
11 for less than 2400 hours a year, never seen it.  
12 This is the first time today.

13 Q (By Ms. Rodewald) And you have no idea  
14 how long the average consumer uses an external USB  
15 drive, correct?

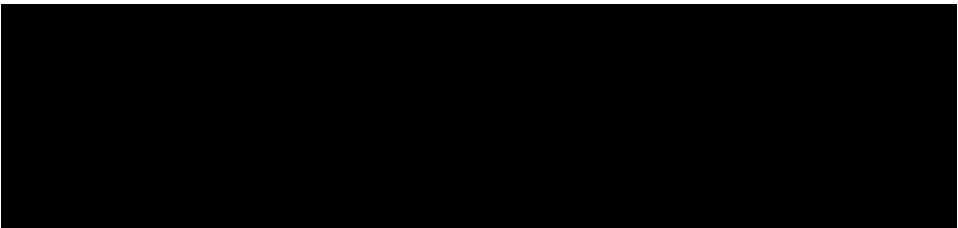
16 A I don't think that matters.

17 MS. SCARLETT: Objection to form.

18 THE WITNESS: I don't think that  
19 matters.

20 MS. RODEWALD: I think we're up to  
21 Exhibit 10.

22 (Exhibit 10 marked.)  
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1 Q (By Ms. Rodewald) Didn't he say that  
2 there is a correlation between the amount of  
3 workload stress and the product's propensity to  
4 show constant failure rate or wear-out?

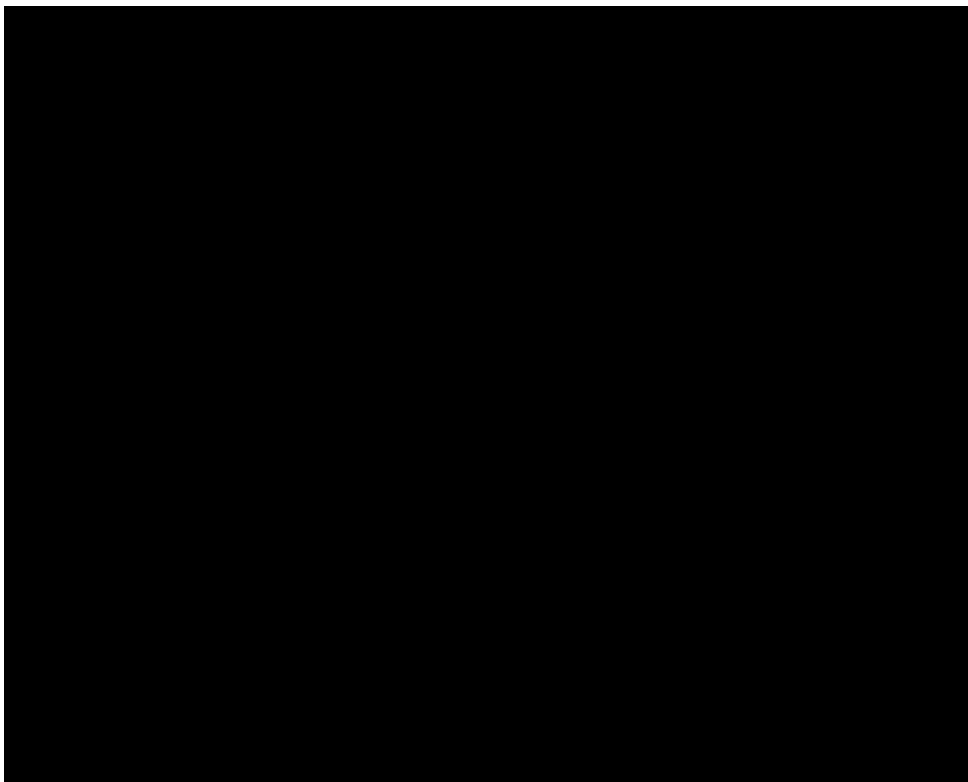
5 MS. SCARLETT: Objection, form.

6 THE WITNESS: He did say that.

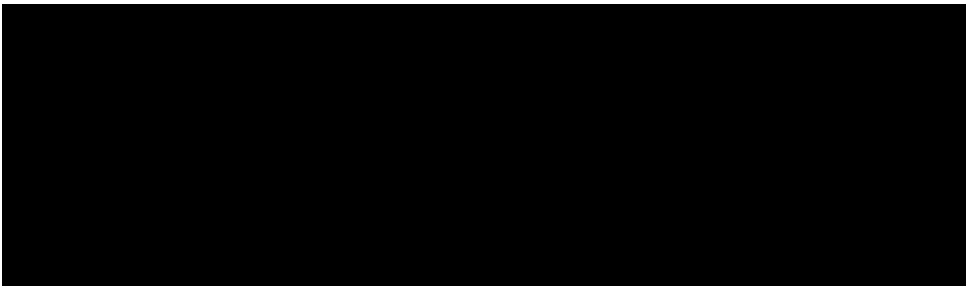
7 Q (By Ms. Rodewald) Okay. So that would  
8 mean that the higher workload products are the  
9 ones that have -- are correlated with this  
10 propensity to show Beta equals greater than 1,  
11 correct?

12 MS. SCARLETT: Objection, form.

13 THE WITNESS: I don't think that's  
14 what he said.



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Q So are all of the bases for your  
opinions that Seagate did not use the right Beta  
value stated in your report?

MS. SCARLETT: Objection, form.

THE WITNESS: I think there are lots  
of opinions that are floating around in my head,  
some of which are scattered, some of which may or  
may not make sense.

I tried to write a report that was not  
comprehensive but one that was exemplary and  
explained the basis for my opinions and provided  
the evidence that I had for Seagate not reaching  
their AFR target of 1 percent.

Q (By Ms. Rodewald) Do you know of any  
evidence, sitting here today, that you did not  
include in your report?

MS. SCARLETT: Objection, form.

THE WITNESS: In the back of my report  
here you will see a long list of numbers.

I didn't print every single one of  
these, and I didn't actually cite every single one

1 drives into mass production in Japan.

2 Quantum designed the drives and then  
3 would send teams of manufacturing engineers to  
4 Japan to implement the production of the drives,  
5 do the preproduction builds, bring the  
6 preproduction drives back for testing in Milpitas,  
7 California, calculate things like AFR, look at  
8 what the yield would be, and when the drive was  
9 deemed sufficiently mature, it would go into mass  
10 production.

11 And one of the levels was -- you know,  
12 is the drive going to be able to achieve a  
13 first-pass yield at the start of mass production.

14 Q You are not one of the manufacturing  
15 engineers, correct?

16 A I was not a manufacturing engineer,  
17 but I had more than enough friends in  
18 manufacturing engineering, so I got to hear all  
19 the relevant stories, and by the time I was done  
20 at Quantum, I was in the management ranks, so I  
21 regularly got updates about what was going on and  
22 what was on the critical path, what types of  
23 problems we're seeing, what we're going to do to  
24 get the yield up prior to mass production.

25 Q But Quantum was not responsible for

1 getting the yield up, was it?

2 A Quantum was. Quantum acted hand in  
3 hand with MKE to identify and correct any issues  
4 prior to mass production, so once the drive went  
5 into mass production, it was being cranked out by  
6 the millions.

7 And this is at a time before the  
8 internet, so we didn't have the ability to issue  
9 firmware updates twice a year or three times a  
10 year like Seagate was doing during the life of the  
11 Grenada product.

12 We had to get it right the first time,  
13 and we qualified all of our vendors before we went  
14 into mass production.

15 We built prototype drives with  
16 combinations of each of the vendors' components to  
17 make sure that they all worked together.

18 We did our AFR life-cycle testing. We  
19 did all of -- I'm sorry, the accelerated  
20 life-cycle testing for AFR.

21 We did all these things prior to  
22 getting the drive into production, and it was only  
23 when both Quantum and MKE were satisfied with the  
24 results that the drive was actually released into  
25 mass pro.

1 We would never change or try to put a  
2 new part on a drive that wasn't already  
3 qualified --

4 Q Okay.

5 A -- once it went into mass pro.

6 Q So you never changed -- after the  
7 drive went into mass production, you never  
8 qualified new suppliers for parts?

9 MS. SCARLETT: Objection, form.

10 THE WITNESS: We didn't -- as far as I  
11 know, we used the suppliers that were qualified  
12 during the design phase and used their parts to  
13 make the product, and we made sure that those  
14 parts were interchangeable with other parts from  
15 other manufacturers.

16 So we avoided swapping out a part in  
17 the middle of production with a new part that  
18 hadn't been qualified with all the other parts.

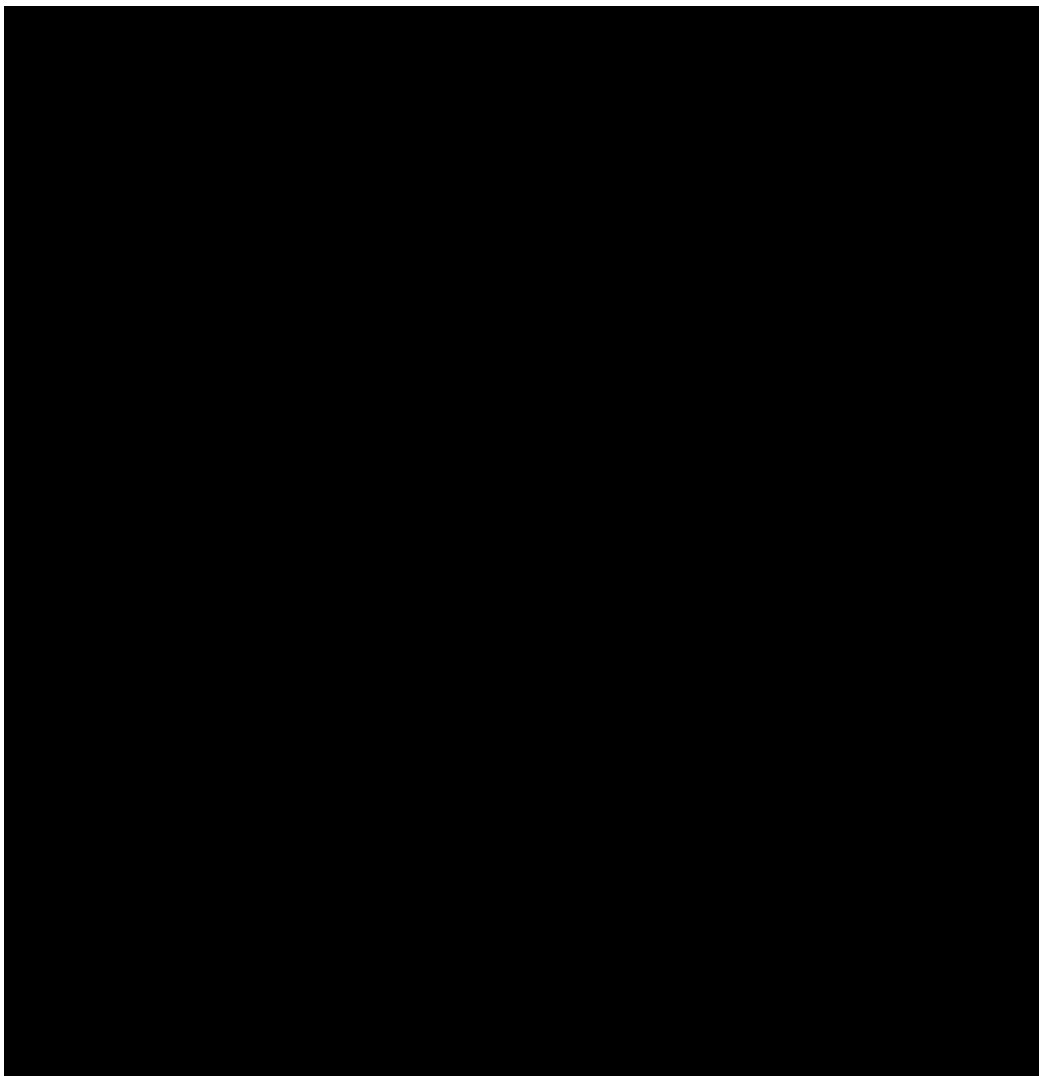
19 A disk drive has a tremendous amount  
20 of parts inside of it. It's a complicated device.

21 We did, however, take new suppliers  
22 and look at qualifying them into the production to  
23 the next production run of a follow-on product.

24 So if we had a bump in aerial density,  
25 if we were going to add some new heads, if we were

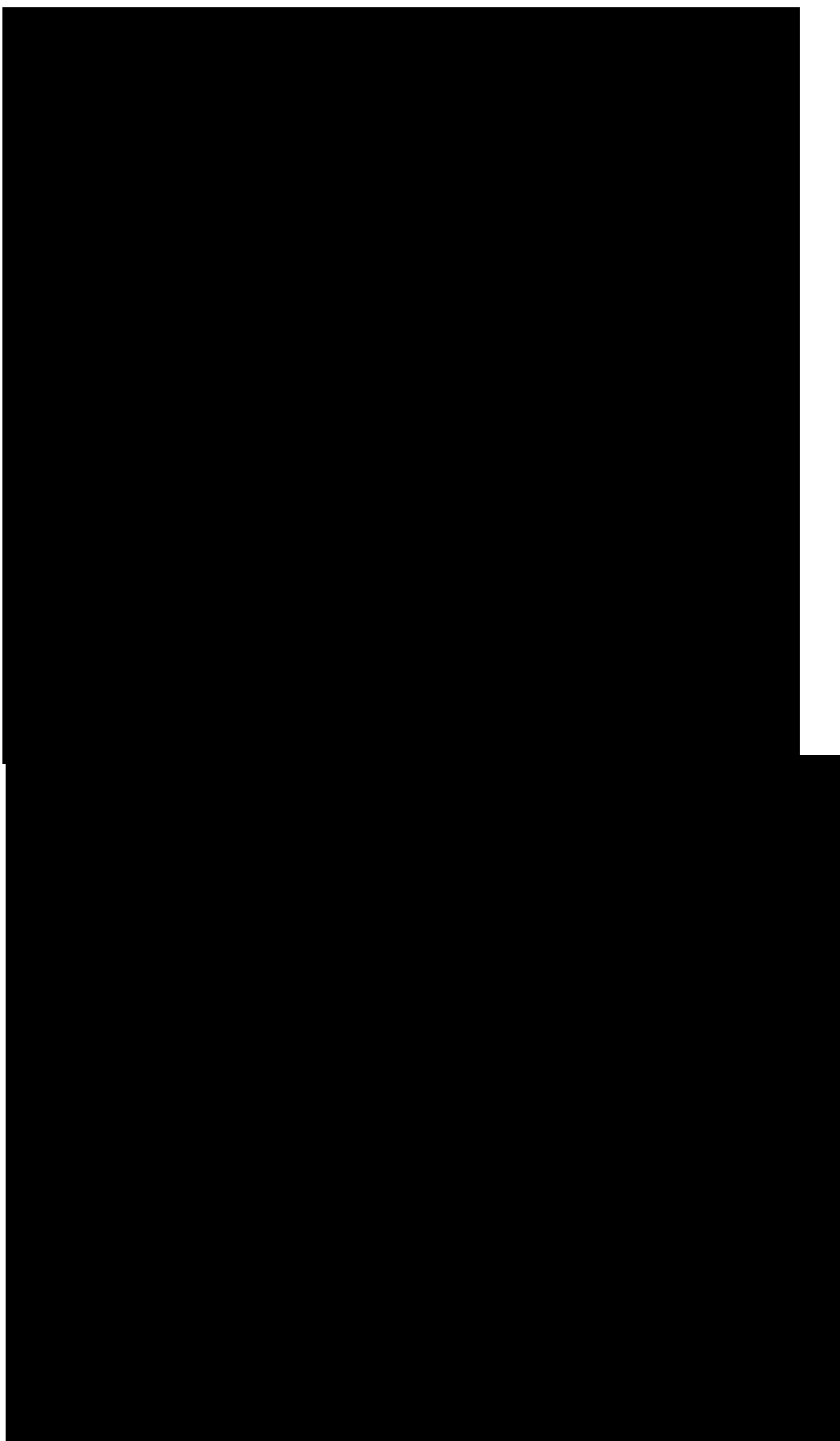
1 going to do something different or target a  
2 different market, we would use that as an  
3 opportunity to qualify a new vendor, knowing that  
4 the original drive, in the case of something like  
5 a classic drive, was already solid and stable.

6 We would take a look at what we could  
7 do in the next generation to add different  
8 components into that, get some more capacity out  
9 of it, get a little more performance, maybe some  
10 more reliability.





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1 generating two or more engineering change requests  
2 every single day and that's enough to overwhelm an  
3 organization.

4 Q (By Ms. Rodewald) So I have a pretty  
5 simple question here. I hope we can figure it out  
6 together.

7 You don't cite any documents in  
8 connection with Figures 19 and 20, and so I'm  
9 wondering if you can tell me what the actual  
10 documents are that you got the data from.

11 A So the documents are the documents  
12 like this FED SEAG0002724, and all of these  
13 documents that represent the monthly engineering  
14 change request -- they are called the engineering  
15 change request logs.

16 Q Okay.

17 A And it's either this document with a  
18 lot of tabs or it's this document and the  
19 subsequent documents.

20 Q So I'm pretty sure that that document  
21 only had one tab, so that would mean that there  
22 are a bunch more of those, but you didn't cite the  
23 Bates numbers in connection with these two  
24 figures.

25 A We can go back and do that if you need

1 that.

2 I'm sorry. That would have been an  
3 oversight, and you know, I hope that we included  
4 those in the disclosure in the back --

5 Q Okay.

6 A -- of all the Bates numbers, but if we  
7 need to, we can pull those out and get them for  
8 you individually.

9 Q Yeah. We were just really trying to  
10 figure out how you made these pretty pictures.  
11 Couldn't figure it out.

12 Now you've mentioned customer code

13 ECRs, and what does that mean?

14 A So a customer code, my understanding  
15 is that would be a change that was implemented at  
16 the request of a specific customer.

17 Q And what might those be?

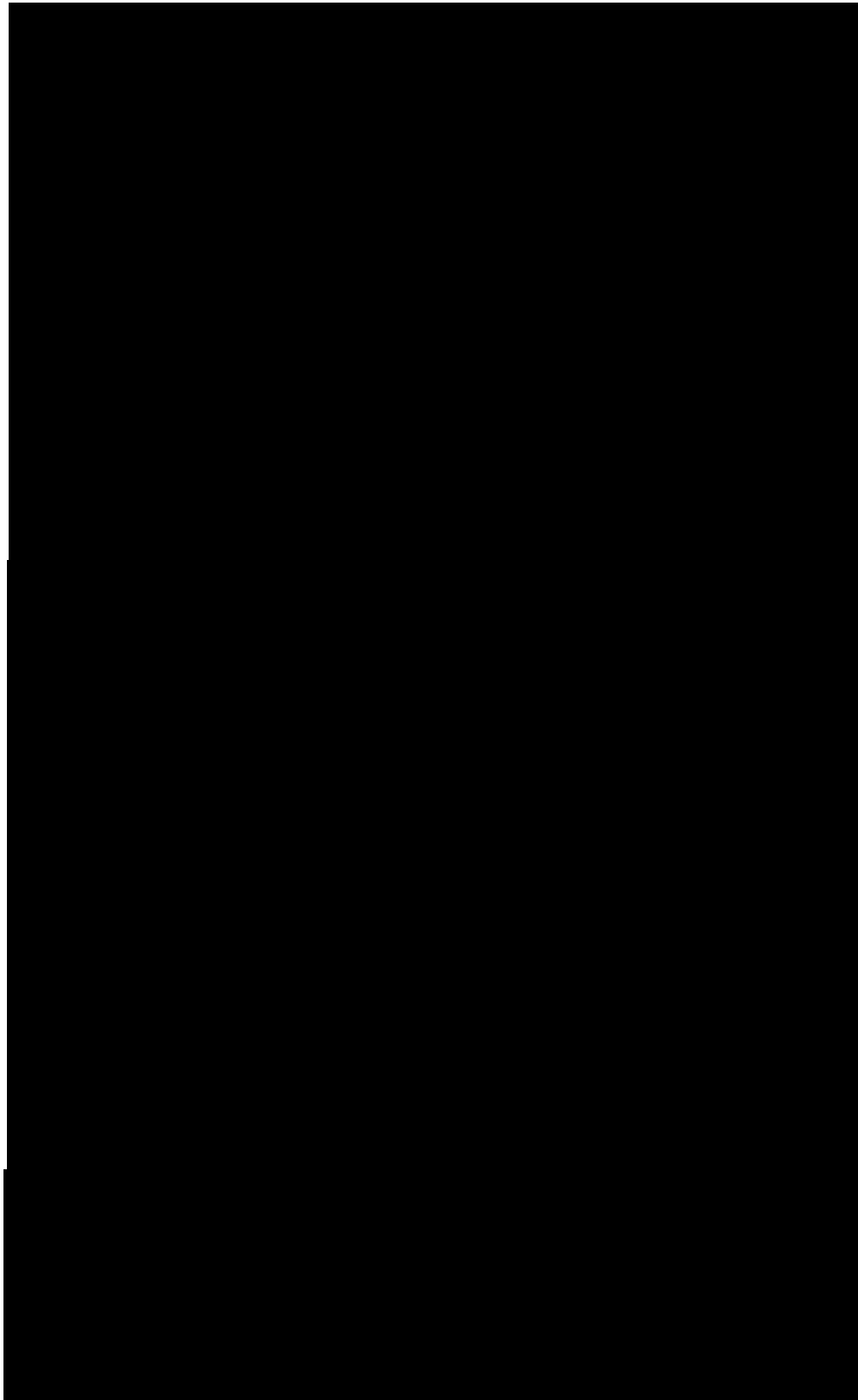
18 A It's too loud. It's -- you know, it's  
19 got the wrong color sticker on it, it doesn't  
20 accept this vendor unique command that we want.

21 Q Okay.

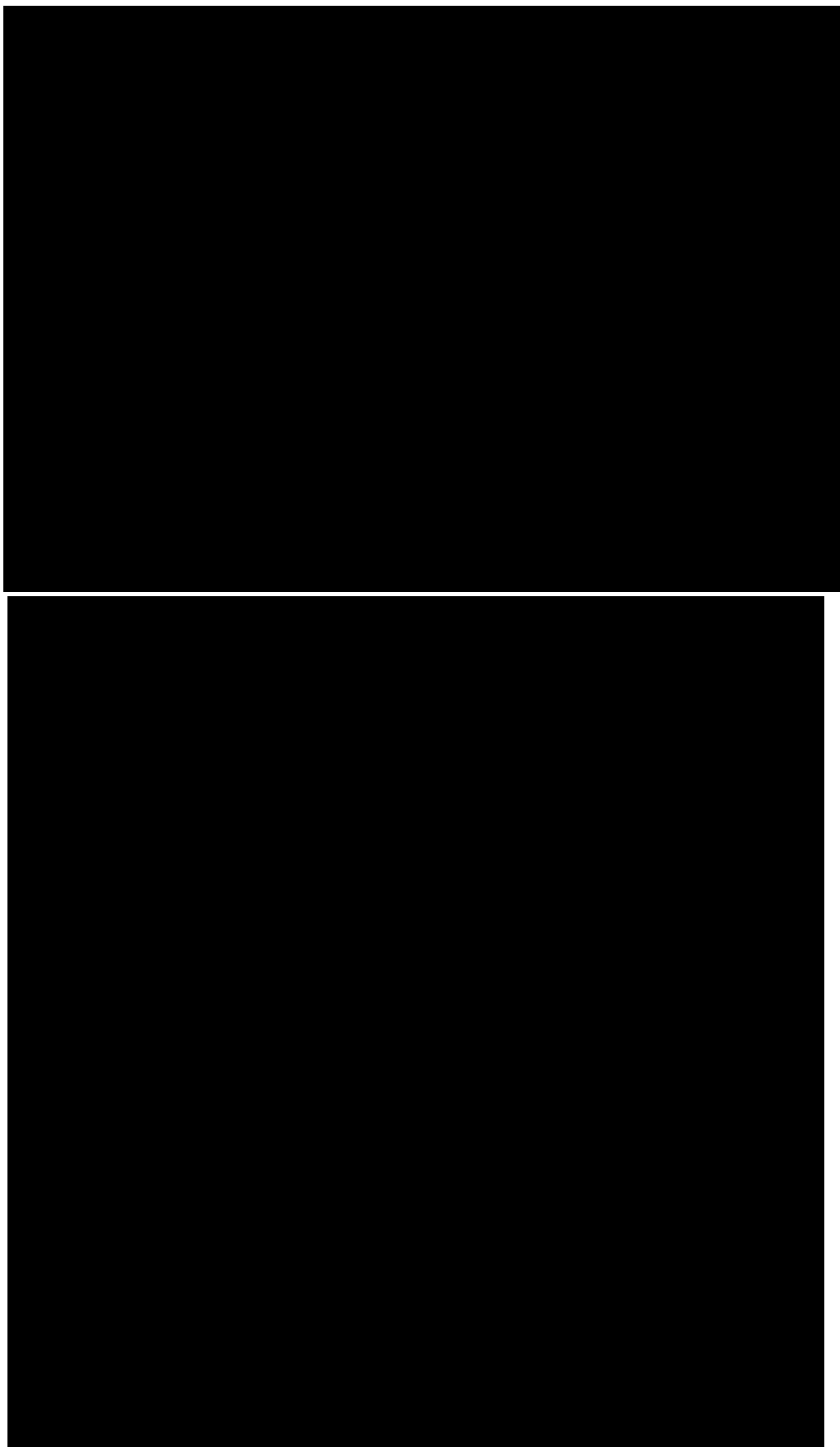
22 A We wanted a blue LED instead of a red  
23 LED. It's that kind of stuff when you're dealing  
24 with customers.

25 But primarily the customer codes are

1 have any knowledge about the information that was  
2 provided to me.



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1 MS. SCARLETT: Objection to form.

2 THE WITNESS: I cited this document as  
3 an AFR of 0.34.

4 I don't believe I said it was the only  
5 document Seagate had ever produced, but, again,  
6 I'm presenting exemplary information here, not  
7 comprehensive information.

8 Q (By Ms. Rodewald) Right now do you know  
9 of any other evidence that Seagate published an  
10 AFR of 0.34 percent in April 2011?

11 MS. SCARLETT: Objection to form.

12 THE WITNESS: Off the top of my head,  
13 I do not, but I seem to remember advertising  
14 different numbers for the AFRs.

15 So the data sheets at some point said  
16 0.34 percent, and that was here on Paragraph 53  
17 and 54.

18 So I'm sorry, the data sheet remained  
19 unchanged, but Seagate continued to advertise the  
20 AFR of the ST3000DM001 on its website as 0.34,  
21 less than 1 percent, until at least January 2013.

22 Q (By Ms. Rodewald) Do you think it  
23 requires your expertise to review the Seagate  
24 website and determine what it said about AFR?

25 MS. SCARLETT: Objection to form.

1 THE WITNESS: I'm sorry. I don't  
2 understand your question.

3 Q (By Ms. Rodewald) Do you think it  
4 requires your expertise to look at Seagate's  
5 website and determine what it said about AFR?

6 A I think --

7 MS. SCARLETT: Objection to form.

8 THE WITNESS: I think that any person  
9 could look at Seagate's website and see what it  
10 says about AFR.

11 Q (By Ms. Rodewald) Okay. Do you think  
12 that an ordinary consumer could look at Seagate's  
13 website and understand what the AFR meant?

14 A So Seagate changed from MTBF to AFR to  
15 make it easier for consumers to understand what it  
16 meant, because consumers had a hard time  
17 understanding what meantime between failure was on  
18 a large population of drives, and they had an  
19 easier time of understanding what annual failure  
20 rate meant.

21 Q But you think that an ordinary  
22 consumer could look at Seagate's website and  
23 understand the information presented there?

24 A I don't see any reason why they  
25 couldn't.

1 Q And what about with regard to the  
2 product manual and the data sheets that you cite  
3 in your report?

4 Is this something that requires your  
5 expertise to understand?

6 MS. SCARLETT: Objection to form.

7 THE WITNESS: I think that the product  
8 manuals and the data sheets are written to be as  
9 simplistic as possible.

10 Q (By Ms. Rodewald) Okay.

11 A So I would say no, they don't require  
12 a Ph.D. in computer engineering to understand  
13 them.

14 MS. RODEWALD: Okay. I believe that's  
15 all I have for now.

16 It seems that you have reserved the  
17 right to add to your opinions and we definitely  
18 reserve the right to continue the deposition of  
19 Mr. Hospodor if he revises or adds to his  
20 opinions.

21 I would like to mark this transcript  
22 as confidential, please.

23 MS. SCARLETT: No questions from the  
24 Plaintiffs.

25 THE VIDEOGRAPHER: This marks the end



1  
2 I, the undersigned, a Certified Shorthand  
3 Reporter for the State of California, do hereby  
4 certify that the witness in the foregoing  
5 deposition was by me first duly sworn to testify  
6 to the truth in the cause herein entitled; that  
7 said deposition was taken at the time and place  
8 herein stated; that the testimony of said witness  
9 was reported by me and thereafter transcribed  
10 under my direction into typewriting; that the  
11 foregoing is a full, complete and true record of  
12 said testimony;

13 I further certify that I am not of  
14 counsel or attorney for either or any of the  
15 parties in the foregoing matter, nor in any way  
16 interested in the outcome of the cause herein  
17 named.

18 IN WITNESS WHEREOF, I have hereunto  
19 set my hand this 17th day of December, 2017.  
20

21 \_\_\_\_\_  
22 MARY HOGAN, CSR NO. 05386  
23  
24  
25

# **EXHIBIT 12**

1 UNITED STATES DISTRICT COURT

2 NORTHERN DISTRICT OF CALIFORNIA

3 No. 5:16-cv-00523-RMW

4  
5 30(b)(6) DEPOSITION OF SEAGATE TECHNOLOGY, LLC  
6 AS GIVEN BY: PATRICK DEWEY  
7 September 7, 2017

8  
9 IN RE SEAGATE TECHNOLOGY, LLC  
10 LITIGATION

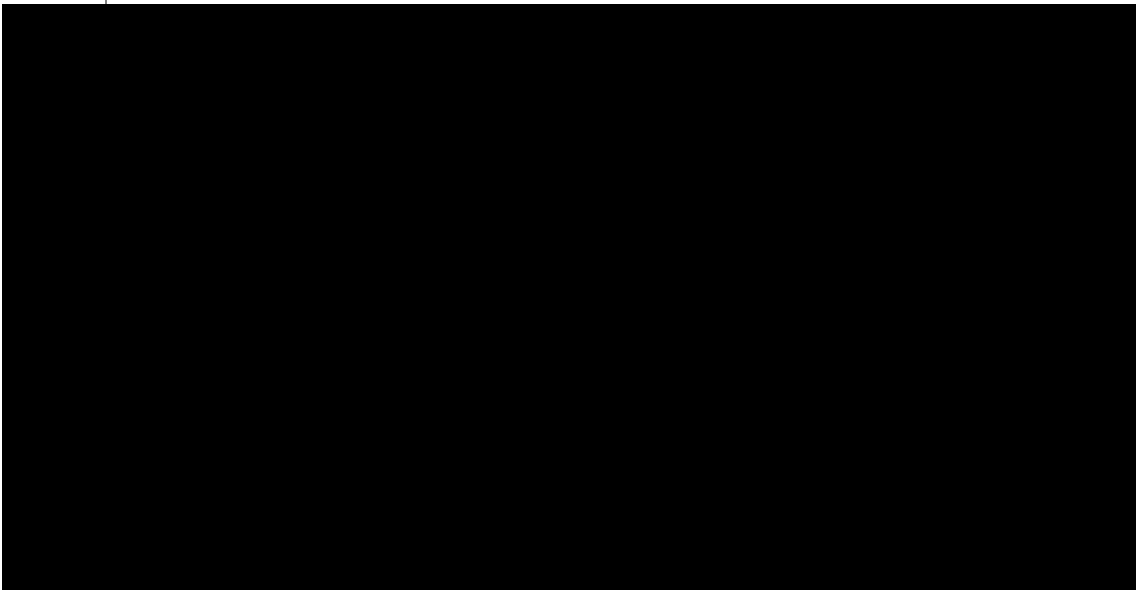
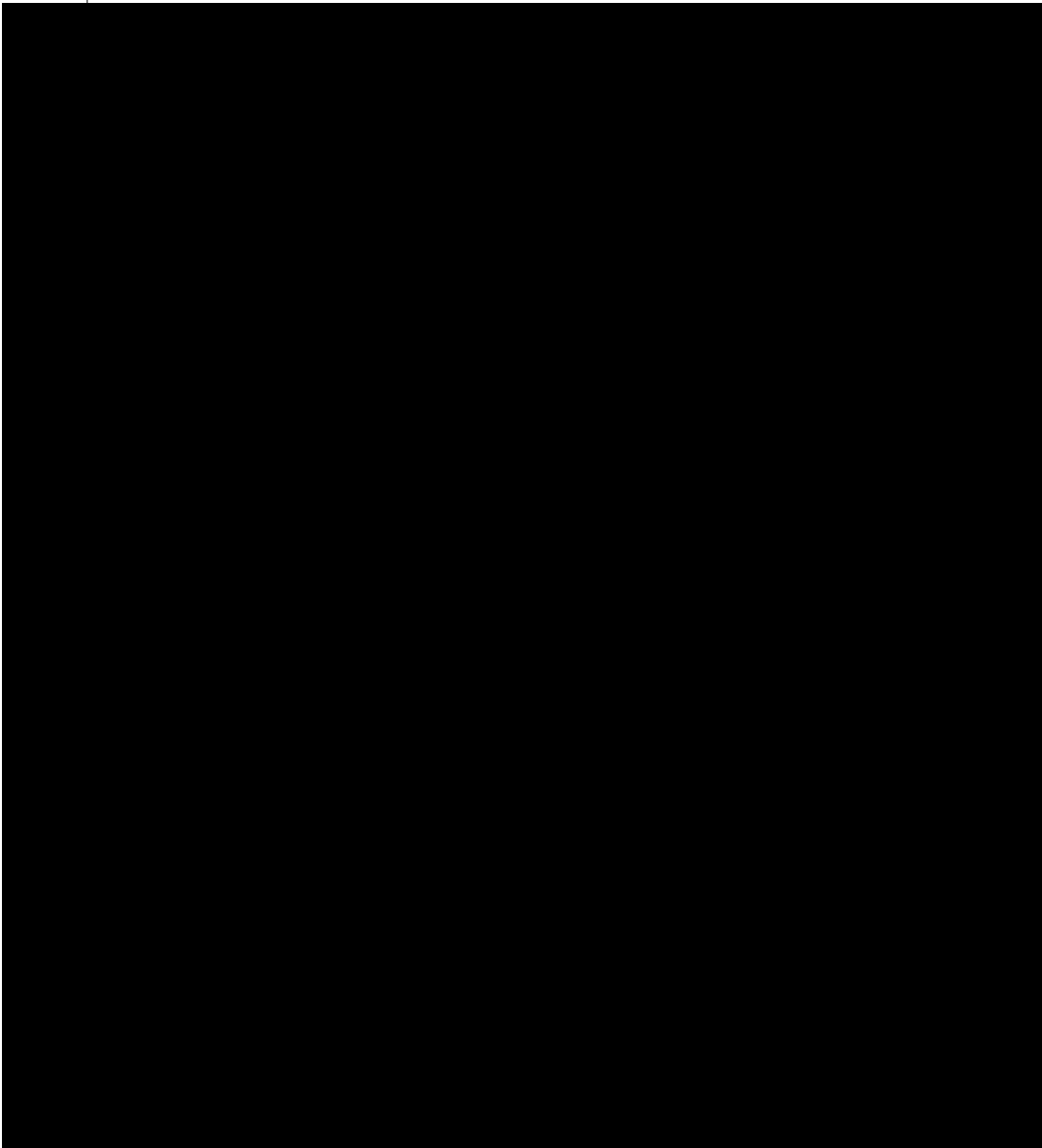
11 APPEARANCES:

12 AXLER GOLDICH, LLC  
13 By Marc A. Goldich, Esq.  
14 Matthew Strout, Esq.  
15 1520 Locust Street, Suite 301  
16 Philadelphia, Pennsylvania 19102  
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Appearing on behalf of Plaintiffs

17 SHEPPARD MULLIN  
18 By Anna S. McLean, Esq.  
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and  
21 Mukund Sharma, Esq.  
22 379 Lytton Avenue  
Palo Alto, California 94301-1479  
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23 Appearing on behalf of Seagate  
Technology, LLC

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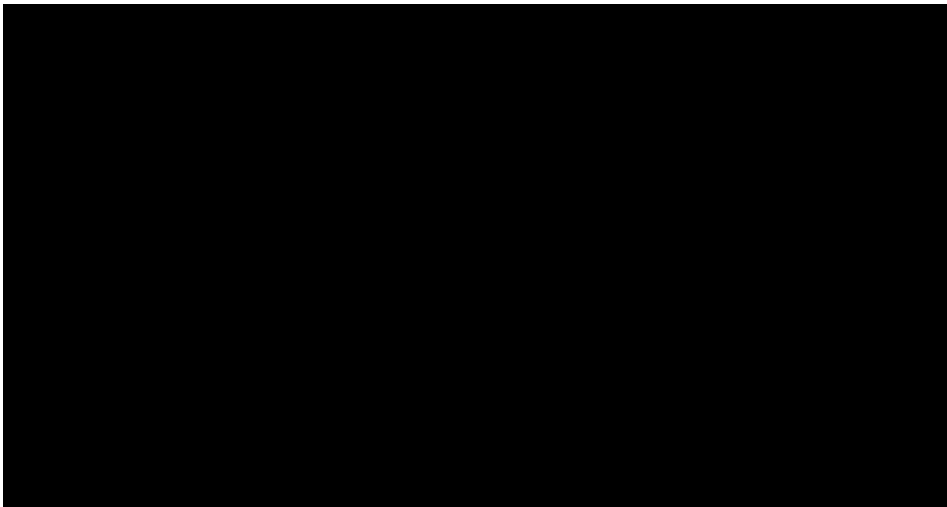
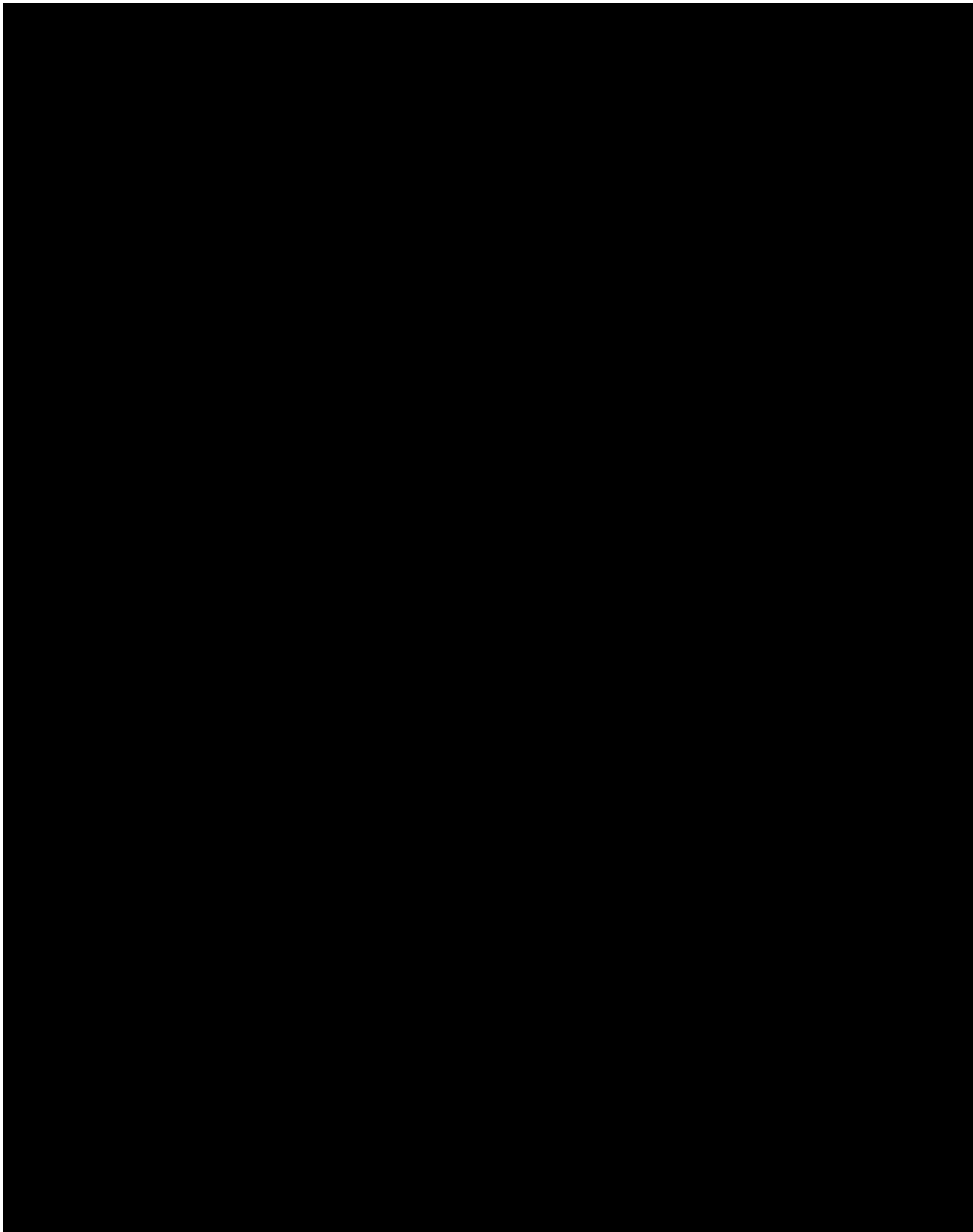


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f those tests are related



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[REDACTED]

1 STATE OF COLORADO)

2 ) ss. REPORTER'S CERTIFICATE

3 COUNTY OF DENVER )

4 I, Pamela J. Hansen, do hereby certify that  
5 I am a Registered Professional Reporter and Notary  
6 Public within the State of Colorado; that previous to  
7 the commencement of the examination, the deponent was  
8 duly sworn to testify to the truth.

9 I further certify that this deposition was  
10 taken in shorthand by me at the time and place herein  
11 set forth, that it was thereafter reduced to  
12 typewritten form, and that the foregoing constitutes  
13 a true and correct transcript.

14 I further certify that I am not related to,  
15 employed by, nor of counsel for any of the parties or  
16 attorneys herein, nor otherwise interested in the  
17 result of the within action.

18 In witness whereof, I have affixed my  
19 signature this 18th day of September, 2017.

20 My commission expires September 3, 2018.

21  
22 \_\_\_\_\_  
23 Pamela J. Hansen, CRR, RPR, RMR  
24 216 - 16th Street, Suite 600  
25 Denver, Colorado 80202

# **EXHIBIT 13**

1 UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF  
2 CALIFORNIA SAN JOSE DIVISION  
CASE NO. 5:16-cv-00523-RMW

3 30(b)(6) DEPOSITION OF SEAGATE July 26, 2017  
4 TECHNOLOGY, LLC BY GLEN ALMGREN

5 IN RE SEAGATE TECHNOLOGY, LLC LITIGATION

6 APPEARANCES:

7 AXLER GOLDICH, LLC

8 By Marc A. Goldich, Esq.

9 and

10 Matthew Strout, Esq.

11 1520 Locust Street, Suite 301

12 Philadelphia, Pennsylvania 19102

13 Appearing on behalf of Plaintiffs.

14 SHEPPARD, MULLIN, RICHTER & HAMPTON, LLP

15 By Anna S. McLean, Esq.

and

Mukund Sharma, Esq.

Four Embarcadero Center, 17th Floor

San Francisco, California 94111-4109

Appearing on behalf Defendants.

ELITE LITIGATION SOLUTIONS, LLC

1518 Walnut Street, Suite 300

Philadelphia, Pennsylvania 19102

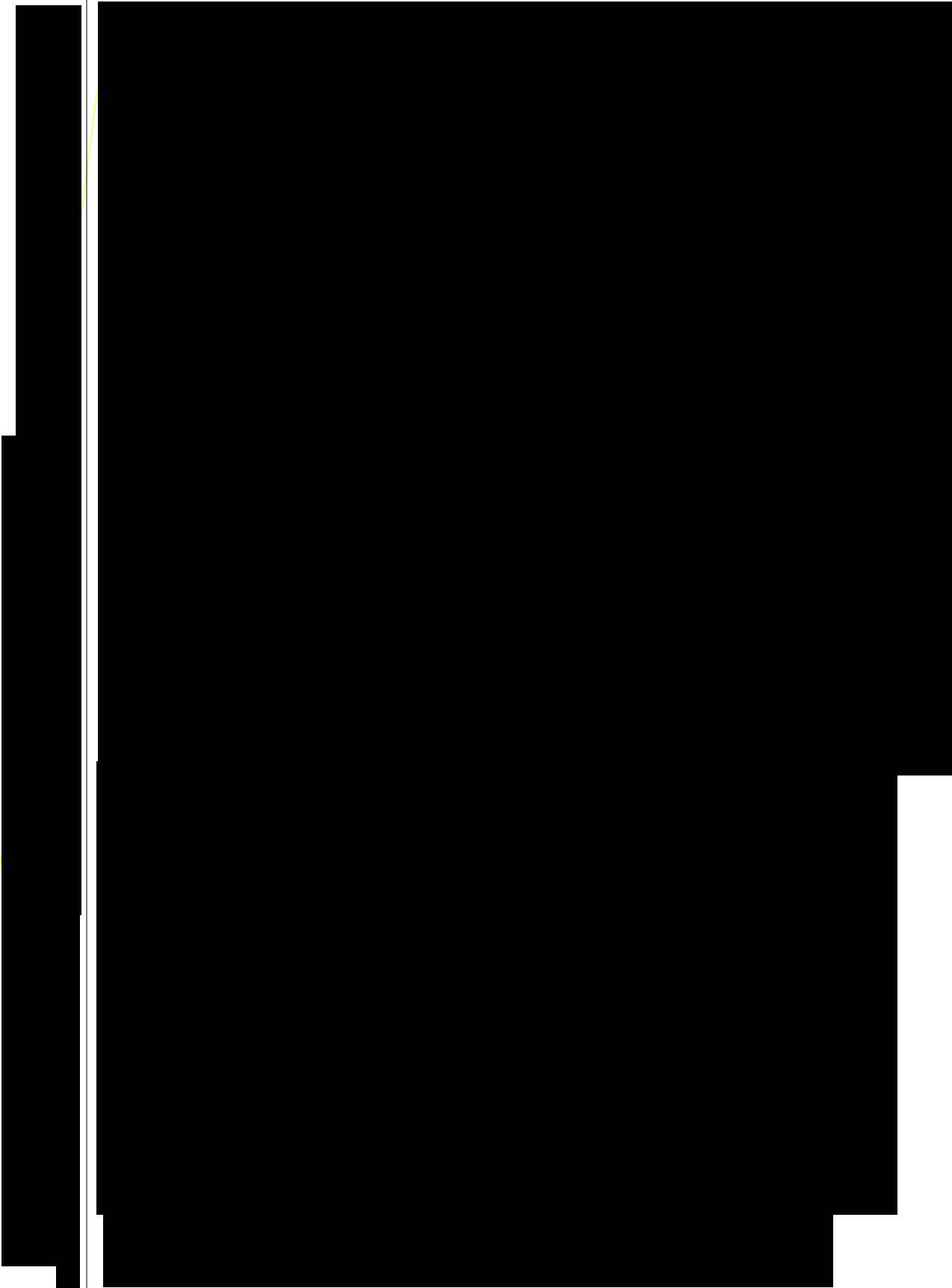
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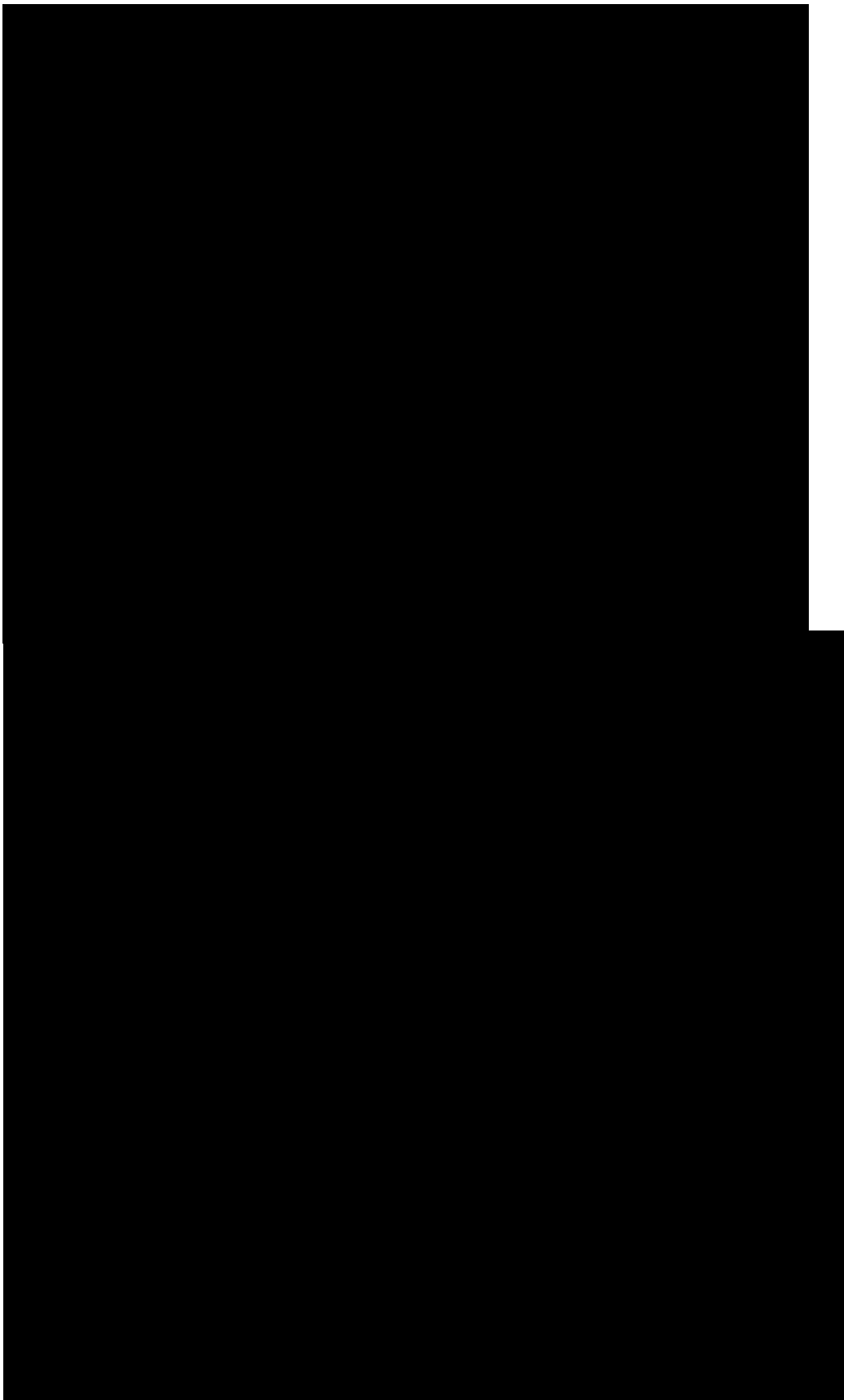
[REDACTED]

[REDACTED]

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1







1 STATE OF COLORADO).

2 ss). REPORTER'S CERTIFICATE

3 COUNTY OF DENVER ).

4 I, Brittany D. Leis, do hereby certify that  
5 I am a Court Reporter and Notary Public within the  
6 State of Colorado; that previous to the commencement  
7 of the examination, the deponent was duly sworn to  
8 testify to the truth.

9 I further certify that this deposition was  
10 taken in shorthand by me at the time and place herein  
11 set forth, that it was thereafter reduced to  
12 typewritten form, and that the foregoing constitutes  
13 a true and correct transcript.

14 I further certify that I am not related to,  
15 employed by, nor of counsel for any of the parties or  
16 attorneys herein, nor otherwise interested in the  
17 result of the within action.

18 In witness whereof, I have affixed my  
19 signature this 4th day of August, 2017.

20 My commission expires December 13, 2017.

21  
22  
23 \_\_\_\_\_  
Brittany D. Leis  
216 - 16th Street, Suite 600  
24 Denver, Colorado 80202

# **EXHIBIT 14**

**SEAGATE TECHNOLOGY HOLDING, INC. -  
Seagate Technology LLC adv. Tim  
Pozar/Scott Nalick**

***Khurshudov, Andrei - 09-08-2017***

***9/8/2017***

**Full-size Transcript**

**Issue Filter: Print**

**Prepared by:**

Peter Stone  
Sheppard Mullin

Friday, January 5, 2018

1 UNITED STATES DISTRICT COURT

2 NORTHERN DISTRICT OF CALIFORNIA

3 No. 5:16-cv-00523-RMW

4  
5 IN RE SEAGATE TECHNOLOGY, LLC

6 LITIGATION

7  
8 SUPERIOR COURT OF THE STATE OF CALIFORNIA

9 FOR THE CITY AND COUNTY OF SAN FRANCISCO

10 Case No. CGC-15-547787

11 TIM POZAR and SCOTT NALICK,  
12 Individually and on Behalf of All Others  
Similarly situated,

13 Plaintiffs,

14 vs.

15 SEAGATE TECHNOLOGY LLC and DOES  
16 1-50,

17 Defendants.

18 VIDEOTAPED DEPOSITION OF ANDREI KHURSHUDOV  
19 September 8, 2017

1           A       I was responsible for developing -- for  
2       running projects related to big data analytics,  
3       machine learning, and different types of exploratory  
4       studies.

5           Q       What is machine learning?

6           A       Machine learning term refers to the field  
7       of statistics, mathematics or computer science that  
8       relates to algorithms or software that improve  
9       performance with experience or with time or data.  
10       Essentially, they learn over time.

11          Q       Okay. And you also said you did  
12       exploratory studies.

13          A       Uh-huh.

14          Q       What does that mean?

15          A       Ad hoc studies, whatever I was finding to  
16       be important for the company at the time.

17          Q       So you had the freedom to choose the  
18       own -- your -- the areas that you wanted to study?

19          A       That's correct.

20          Q       Did you work at any other position at  
21       Seagate in the past other than as chief technologist?

22          A       Yes.

23          Q       And what was that?

24          A       I started as a director of advanced  
25       reliability in 2006. Then I moved to -- my subjects

1 changed, but the next milestone I will say was a  
2 general manager of Seagate Recovery Services. Then I  
3 worked as a senior director in different other  
4 functions, including managing cloud research in the  
5 analytics organization.

6 Q All right. Well, let's take it  
7 chronologically from your earliest position. Take a  
8 look at your LinkedIn profile on Page 2, please.  
9 What was your first position at Seagate?

10 A Yes, it says senior director, worldwide  
11 advanced quality and reliability.

12 Q What did you do in that position?

13



12 MR. SHARMA: I think -- did you say  
13 fraction or function?

14 THE DEPONENT: Fraction.

15 MR. SHARMA: Fraction.

16 THE DEPONENT: Fraction. It's a smaller.

17 Q (BY MR. STROUT) Okay. And we'll --

18 A I'm sorry.

19 Q We'll return to AFR in a little bit, but  
20 for now I want to ask you about ARR. What is that  
21 exactly?

22 A Annualized return rate is a fraction of  
23 shipped product that comes back for whatever reason,  
24 for any reason, during one year of operations.

25 THE REPORTER: During one year of --

1 failure rate increases at the end of its life.

2 Q (BY MR. STROUT) Let's turn back to your  
3 LinkedIn profile. What was your position after  
4 senior director of quality data analytics?

5 A Yes. General manager, Seagate Recovery  
6 Services.

7 Q And you were there from June 2010 to  
8 August 2011, correct?

9 A Uh-huh.

10 Q What were your responsibilities in that  
11 position?

12 A Seagate acquired a recovery service  
13 business from outside, and I was asked to manage it  
14 and integrate it into Seagate company business wise,  
15 technology wise, people wise.

16 Q What was your position after that?

17 A Yes, senior director, cloud research and  
18 analytics.

19 Q And you were there from August 2011 until  
20 May 2015; is that right?

21 A Correct.

22 Q What did you do in that position?

23 A Well, as the title says, Seagate became  
24 interested in cloud technology and cloud products,  
25 and new organizations were formed focusing on this



1 field. And I was building and managing an  
2 organization that was responsible for doing research  
3 work, in a way ad hoc research activities, and doing  
4 analytics and developing analytics solutions for  
5 Seagate.

6 Q In this position, did you deal at all with  
7 annualized failure rate?

8 A Yes.

9 Q So then you also dealt with mean time  
10 between failure?

11 A Correct.

12 Q And defective parts per million?

13 A Correct.

14 Q Did you deal at all with factory yield in  
15 this position?

16 A Unlikely.

17 Q And then after that your position was, as  
18 we discussed, chief technologist, big data analytics  
19 and insights; is that correct?

20 A Correct.

21 Q Okay. You can put the LinkedIn profile to  
22 the side.

23 Before you started working at Seagate --  
24 and actually, you can refer back to the LinkedIn  
25 profile if necessary -- but where did you work prior

1           A       It's a very general question. Everyone at  
2       Seagate worked on everything related to everything  
3       Seagate makes. Specifically, I did not work on  
4       products.

5           Q       (BY MR. STROUT) What do you mean by you  
6       didn't work on products?

7           A       There's a product reliability  
8       organization, and I was always in advanced/research  
9       function. So we could have performed analysis of  
10      this or that, or look into some issues, but actual  
11      product quality and reliability was not my  
12      responsibility or my organization's responsibility.

13          Q       Did you perform any research at all that  
14      may have been on or related to the ST3000 drive?

15          A       I'm sure I did.

16          Q       Did you perform any research on any of the  
17      external drives that used the ST3000 in them?

18          A       I -- to my recollection, I cannot answer  
19      this question as yes or no. I do not know, do not  
20      remember.

21          Q       All right. That's okay.

22                   I'd like to now go back to talk a little  
23      bit more about annualized failure rate.

24          A       Uh-huh.

25          Q       I know you spoke of it earlier, but could

1 you please define AFR for me?

2 A If you look at all the drives of a  
3 particular model, say, produced during one year, and  
4 then you trace their future, the fraction of drives  
5 that will come back will represent the annualized  
6 return rate.

7 Of the returns that come back, there will  
8 be a fraction measurable, sometimes greater,  
9 sometimes smaller, fraction of drives that we will --  
10 Seagate will call no trouble found, for example, no  
11 trouble found, which means when drives are tested  
12 internally, nothing wrong could be found with them,  
13 and it remains a question why they were returned.

14 There will be another fraction that will  
15 be tested and linked to issues outside of expected  
16 range of stress. As I mentioned before, drives that  
17 are clearly mishandled, for example, or drives that  
18 are electrocuted by poor electric connection,  
19 something that could be easily discovered.

20 In the world of the retail, what's called  
21 Disty, distribution drives, there will be some other  
22 group of drives. Sometimes they are returned without  
23 even being removed from the packaging, essentially.  
24 Internally this will be called buyer's remorse cases,  
25 something like that. Essentially somebody buys and

1 then change his mind and returns a drive even without  
2 trying.

3 So depending on the application or market,  
4 the fraction of not true failures varies, and it  
5 could be as great as 80 percent in some cases. For  
6 every 100 returned drives, only 20 will be confirmed  
7 as having real problem. This is not a typical  
8 number, but it could be as bad as this.

9 Q So does AFR -- that does not include no  
10 trouble found drives, right?

11 A Uh-huh.

12 Q Or drives that were returned due to  
13 buyer's remorse?

14 A Uh-huh.

15 Q Or drives that were mishandled?

16 A Uh-huh.

17 THE REPORTER: Can I just get you to say  
18 yes or no?

19 THE DEPONENT: Oh, yes. Yes.

20 Q (BY MR. STROUT) Okay. So -- yeah, I  
21 should -- I'll just run through those one more time  
22 just because you said uh-huh instead of yes.

23 So AFR does not include drives --

24 A Sorry.

25 MR. SHARMA: Take your time.

1 THE VIDEOGRAPHER: Need some help?

2 THE DEPONENT: I didn't do --

3 (Discussion off the record.)

4 THE DEPONENT: Okay.

5 Q (BY MR. STROUT) All right. So AFR does  
6 not include drives where there is no trouble found?

7 A Correct.

8 Q And it does not include drives that were  
9 returned due to what you characterized as buyer's  
10 remorse?

11 A Correct.

12 Q And AFR also does not include drives that  
13 were misused?

14 A I believe so.

15 Q Does Seagate calculate AFR, you know,  
16 prior to releasing a drive?

17 MR. SHARMA: Objection, lack of  
18 foundation.

19 Q (BY MR. STROUT) You can answer.

20 THE DEPONENT: How is that --

21 MR. SHARMA: If you know the answer --  
22 yeah, if you know the answer to the question --

23 Q (BY MR. STROUT) You can answer.

24 MR. GOLDICH: We normally just ignore  
25 them.

1 Is it 5?

2 THE REPORTER: 6.

3 MR. STROUT: 6, all right.

4 I'm now marking as Exhibit 6 the document

5 Bates labeled FED\_SEAG 0019045.

6 (Exhibit 6 marked.)

7 Q (BY MR. STROUT) All right. Have you seen  
8 this document before?

9 A I have not seen this document before. It  
10 looks like a product manual, again typical product  
11 manual for a Seagate product.

12 Q All right. I represent to you that this  
13 document was produced by Seagate during discovery in  
14 this case. Right there on the first page it says  
15 Product Manual, Barracuda; is that right?

16 A Yes, correct.

17 MS. MCLEAN: I'd also like to note, as I  
18 did yesterday, that this document appears to be a  
19 draft. It's not clear that it -- it was released to  
20 the public because it has redlines in it.

21 Q (BY MR. STROUT) Underneath where it says  
22 Barracuda it says ST3000DM001; is that right?

23 A Yes, that's correct.

24 Q And this document is dated April 2011,  
25 right?

1       A       Correct.

2       Q       And the data sheet that we were just  
3       talking about, the copyright date was 2011, right?

4               MR. SHARMA: Take a look at it if you need  
5       to.

6       A       That's correct.

7       Q       (BY MR. STROUT) Please turn to Page  
8       19056.

9       A       Uh-huh. Yes.

10      Q       Do you see on this table where it says  
11      annualized failure rate?

12      A       Yes, I can see.

13      Q       Okay. And there's a column on here for  
14      the ST3000 drive; is that right?

15      A       Yes, that's correct.

16      Q       And the annualized failure rate for the  
17      ST3000 is listed as .34 percent; is that right?

18      A       I can see.

19      Q       Do you know why it says .34 percent here,  
20      whereas in the data sheet we just looked at it said  
21      less than 1 percent?

22               MR. SHARMA: Objection, lacks foundation,  
23      calls for speculation.

24      A       I don't know.

25      Q       (BY MR. STROUT) Okay.

1



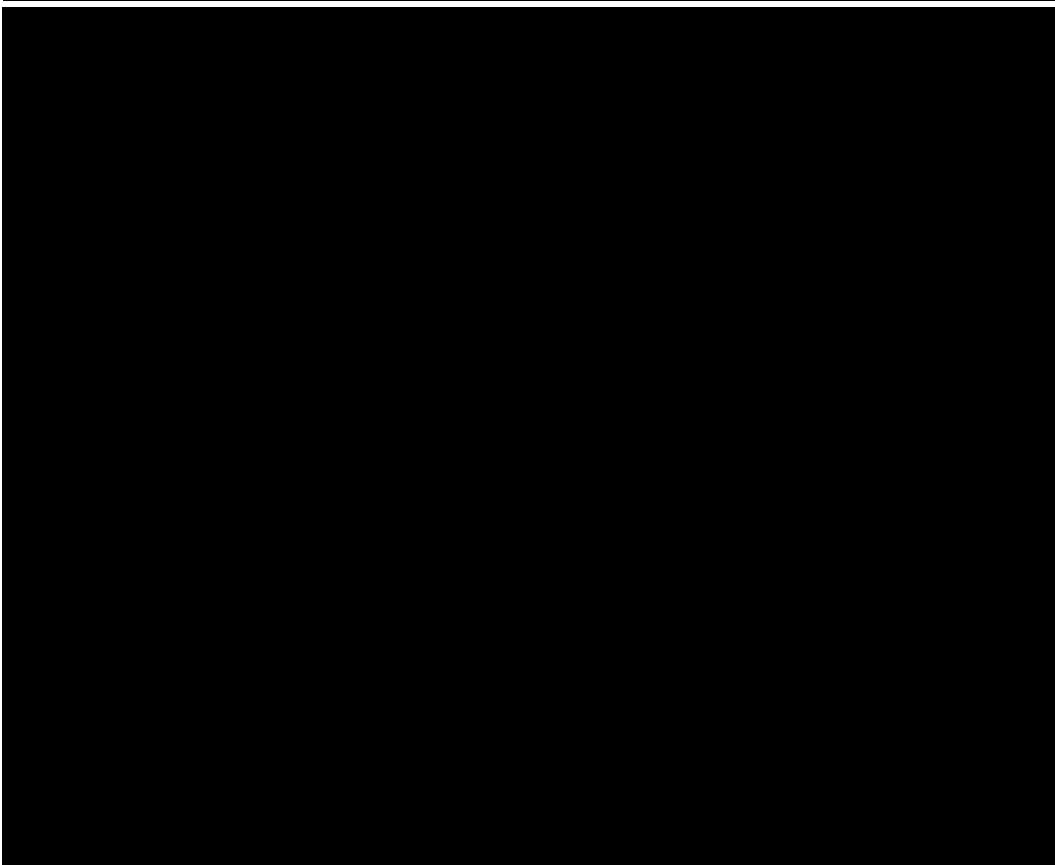
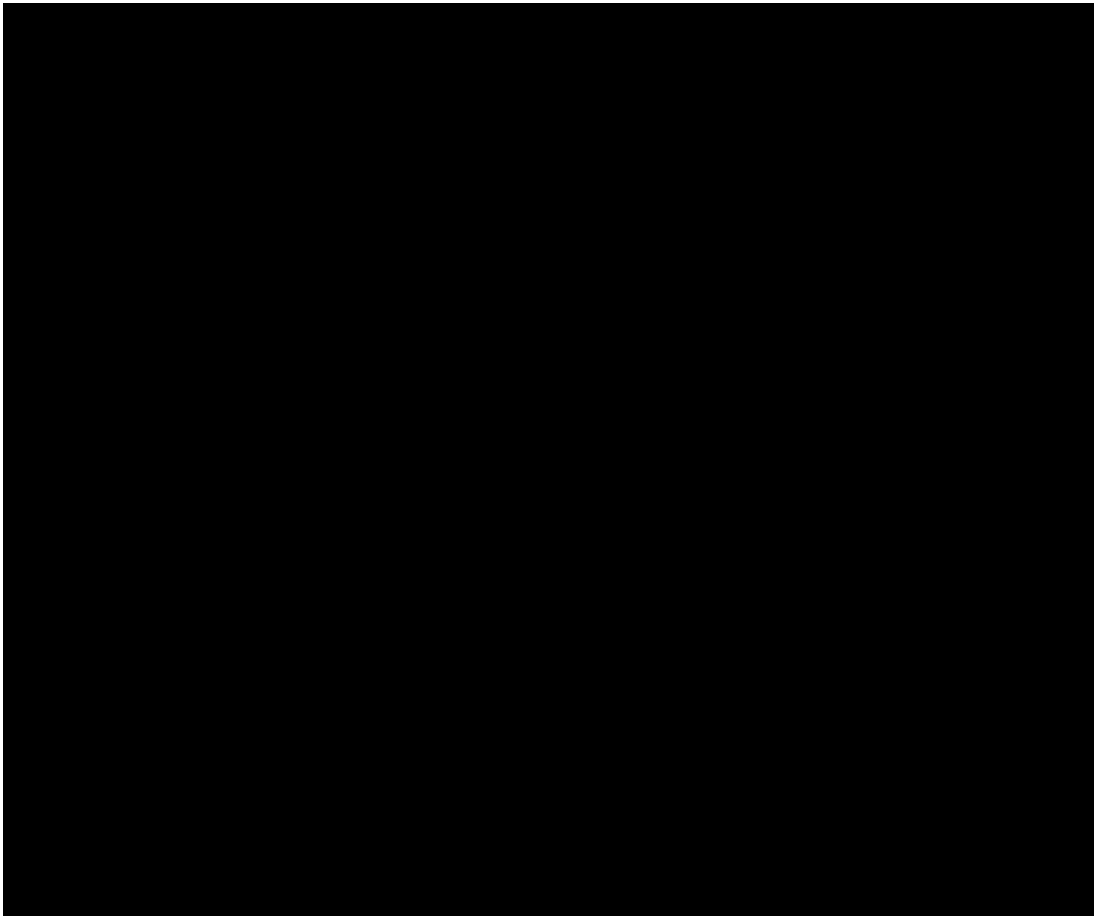
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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



[REDACTED]

[REDACTED]

[REDACTED]





[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]







[REDACTED]



[REDACTED]

[REDACTED]

[REDACTED]



[REDACTED]

1 STATE OF COLORADO)

2 ) ss. REPORTER'S CERTIFICATE

3 COUNTY OF DENVER )

4 I, Pamela J. Hansen, do hereby certify that  
5 I am a Registered Professional Reporter and Notary  
6 Public within the State of Colorado; that previous to  
7 the commencement of the examination, the deponent was  
8 duly sworn to testify to the truth.

9 I further certify that this deposition was  
10 taken in shorthand by me at the time and place herein  
11 set forth, that it was thereafter reduced to  
12 typewritten form, and that the foregoing constitutes  
13 a true and correct transcript.

14 I further certify that I am not related to,  
15 employed by, nor of counsel for any of the parties or  
16 attorneys herein, nor otherwise interested in the  
17 result of the within action.

18 In witness whereof, I have affixed my  
19 signature and seal this 21st day of September, 2017.

20 My commission expires September 3, 2018.

21  
22 \_\_\_\_\_  
23 Pamela J. Hansen, CRR, RPR, RMR  
24 216 - 16th Street, Suite 600  
25 Denver, Colorado 80202

# **EXHIBIT 15**

**[FILED UNDER SEAL]**

**EXHIBIT 16**  
[FILED UNDER SEAL]

# **EXHIBIT 17**

1 SHEPPARD, MULLIN, RICHTER & HAMPTON LLP  
A Limited Liability Partnership  
2 Including Professional Corporations  
NEIL A.F. POPOVIĆ, Cal. Bar No. 132403  
3 ANNA S. McLEAN, Cal. Bar No. 142233  
TENAYA RODEWALD, Cal. Bar No. 307610  
4 LIÊN H. PAYNE, Cal. Bar No. 291569  
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ELECTRONICALLY  
**FILED**  
*Superior Court of California,  
County of San Francisco*  
**06/30/2017**  
Clerk of the Court  
BY: VANESSA WU  
Deputy Clerk

9  
10 Attorneys for Defendant SEAGATE TECHNOLOGY LLC

11  
12 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
13 FOR THE CITY AND COUNTY OF SAN FRANCISCO

14 TIM POZAR and SCOTT NALICK,  
15 Individually and on Behalf of All Others  
16 Similarly Situated,

17 Plaintiffs,

18 v.

19 SEAGATE TECHNOLOGY LLC and DOES  
1-50,

20 Defendants.

Case No. CGC-15-547787

**DECLARATION OF DAVE ROLLINGS  
IN SUPPORT OF DEFENDANT  
SEAGATE'S OPPOSITION TO  
PLAINTIFFS' MOTION FOR CLASS  
CERTIFICATION**

Judge: Hon. Curtis E.A. Karnow  
Date: August 9, 2017  
Time: 2:00 p.m.  
Dept.: 304

1 I, Dave Rollings, declare as follows:

2 1. I have personal knowledge of the facts set forth in this declaration, and, if called as  
3 a witness, could and would competently testify to their truth.

4 2. I have worked at Seagate Technology LLC ("Seagate") since 1988. I have worked  
5 as a customer-facing Field Applications Engineer since 1998. In this role, I work with Seagate  
6 customers to understand what applications they are using and to advise them on using the proper  
7 hard drives ("HDDs") for the application. If customers experience issues with Seagate's HDDs, I  
8 troubleshoot those issues by working directly with them. This can involve doing onsite visits with  
9 customers, pulling the appropriate logs and information from the customer's HDDs and systems,  
10 and delivering these logs and information to Seagate's Design Center for failure analysis. If the  
11 customer is interested in the results of failure analysis testing, I am responsible for reporting these  
12 results to the customer.

13 3. It is my understanding that Seagate HDDs with model number ST3000DM001 (the  
14 "Drives") are at issue in this action. The Drives were marketed under numerous names, including  
15 the Barracuda and the Backup Plus. The Drives are consumer, desktop HDDs that are not  
16 designed for use in enterprise applications.

17 4. I was the Field Applications Engineer responsible for assisting and advising  
18 Backblaze Inc. ("Backblaze"). As part of my relationship with Backblaze, I visited Backblaze's  
19 corporate headquarters in San Mateo. While I was there, they showed me the Backblaze Pod 2.0  
20 design and I talked to Backblaze about the design. HDDs in the Pod 2.0 design were mounted  
21 between guides, with the upper part of the HDDs held in place with rubber bands to prevent the  
22 HDDs from banging against the guides in the pod. I advised Backblaze that holding the upper part  
23 of the HDDs in place with rubber bands could contribute to HDD failure by coming loose and  
24 allowing excessive vibration between the HDDs. I also expressed concern to Backblaze that the  
25 Pod 2.0 design would contribute to mishandling of the HDDs.

26 5. Some of the HDDs installed in the Backblaze Pod 2.0 were the Drives. I advised  
27 Backblaze that the Drives were not appropriate for Backblaze's data system, which is an enterprise  
28 cloud storage application that runs 24/7. Backblaze employees informed me that Backblaze

1 employs a cost-driven business model and that Backblaze did not want to incur higher costs by  
2 purchasing more expensive enterprise class HDDs.

3 6. At some point in 2014, Backblaze reported experiencing unusually high failure  
4 rates with the Drives. Prior to Backblaze's report, I was not aware of any customer complaints  
5 regarding the performance of the Drives or high failure rates associated with the Drives.

6 7. I obtained logs from the Drives that Backblaze pulled from its system due to  
7 alleged failure. The logs showed a high number of "No Trouble Found" ("NTF") results, which  
8 indicates an HDD is operating properly. I also obtained physical drives that were pulled from  
9 Backblaze's pods due to alleged failure. I performed verification tests on these Drives. I also  
10 worked with Seagate's Design Center in performing failure analyses on these Drives. To the  
11 extent that Seagate's testing confirmed certain Drives had failed, no one root cause or consistent  
12 pattern of failure was identified. Seagate's testing did not reveal any inherent defect in the Drives  
13 themselves.


14 8. I think it is likely that the problems Backblaze reported were primarily due to  
15 Backblaze inappropriately using these consumer, desktop Drives in its 24/7, enterprise  
16 environment for which the Drives were not designed. Backblaze's Pod 2.0 design, which was  
17 subject to excessive drive vibration and drive mishandling, probably also contributed to the failure  
18 rate Backblaze reported.

19 9. Plaintiffs have asserted that Seagate concluded Backblaze's storage pods worked  
20 properly and that testing results pointed to issues with the Drives rather than Backblaze's storage  
21 pod design. Seagate only tested Backblaze's Pod 3.0 and 4.0 designs. The reports Seagate  
22 produced about the Pod 3.0 and 4.0 design are not applicable or transferrable to the Pod 2.0 design  
23 because: (1) Backblaze upgraded its pod design and replaced the rubber bands used in the Pod 2.0  
24 design with lids that clamped down on the installed HDDs and were intended to reduce vibration,  
25 as Backblaze reported (<https://www.backblaze.com/blog/180tb-of-good-vibrations-storage-pod-3-0/>), and (2) The ST3000DM001 Drives were installed into Backblaze's Pod 2.0 design, not the  
26 Pod 3.0 or 4.0 design.  
27  
28



10. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on this 30 day of June, 2017, at Cupertino, California.

  
Dave Rollings

# **EXHIBIT 18**

1 SHEPPARD, MULLIN, RICHTER & HAMPTON LLP  
A Limited Liability Partnership  
2 Including Professional Corporations  
NEIL A.F. POPOVIC, Cal. Bar No. 132403  
3 ANNA S. McLEAN, Cal. Bar No. 142233  
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9 Attorneys for Defendant SEAGATE TECHNOLOGY LLC  
10

11 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
12 FOR THE CITY AND COUNTY OF SAN FRANCISCO  
13

14 TIM POZAR and SCOTT NALICK,  
15 Individually and on Behalf of All Others  
Similarly Situated,

16 Plaintiffs,

17 v.

18 SEAGATE TECHNOLOGY LLC and DOES  
19 1-50,

20 Defendants.

Case No. CGC-15-547787

**DECLARATION OF SEK NAM "ALLEN"  
NG IN SUPPORT OF DEFENDANT  
SEAGATE'S OPPOSITION TO  
PLAINTIFFS' MOTION FOR CLASS  
CERTIFICATION**

Judge: Hon. Curtis E.A. Karnow  
Date: August 9, 2017  
Time: 2:00 p.m.  
Dept.: 304

1 I, Sek Nam "Allen" Ng, declare as follows:

2 1. I am the Director of Customer Technical Support for the Americas Channel and  
3 Original Equipment Manufacturers ("OEMs") at Seagate Technology LLC ("Seagate"). I  
4 graduated from the University of Kansas with a Bachelor of Science in Electrical Engineering in  
5 1999. I have held engineering positions at various computer and hard drive companies  
6 continuously since obtaining my degree.

7 2. I have personal knowledge of the facts set forth in this declaration, and, if called as  
8 a witness, could and would competently testify to their truth.

9 3. It is my understanding that Seagate hard drives ("HDDs", "drives," or "hard  
10 drives") with model number ST3000DM001 are at issue in this action. Seagate sold these HDDs  
11 in various products, including the Barracuda and Backup Plus.

12 **HDDs Are Complex Electromechanical Devices That Can Fail For Various Reasons**

13 4. HDDs with the ST3000DM001 model number were used in many different  
14 applications and environments both by Seagate and by consumers and end users. For example,  
15 Seagate sold drives with the ST3000DM001 model number as "bare" drives that could be installed  
16 by consumers into desktop computers or into external storage systems such as "network attached  
17 storage" or "NAS" devices. Consumers could install "bare" drives into desktop computers that  
18 they built themselves or into desktop computers or home servers built by computer manufacturers  
19 such as Dell, HP, Lenovo, or others. These computers could be configured in a variety of ways  
20 and may have differences in other components (e.g. video cards, motherboards, cooling systems)  
21 as well. Similarly, consumers could install "bare" drives into NAS systems they assembled  
22 themselves or into NAS boxes built by numerous different manufacturers. Typically, NAS boxes  
23 might be connected to one or more computers or hand-held devices in a home and used as  
24 centralized storage or backup for all of the connected computers or devices.

25 5. In computers or NAS systems that use more than one HDD, the drives might be  
26 used slightly differently than they are used in computers or NAS boxes with only one drive. For  
27 example, in systems where several drives are used together, they might be configured as a  
28 Redundant Array of Independent Disks ("RAID"). RAID is a storage technology that combines



multiple HDDs into one logical unit to improve performance and/or provide data redundancy for reliability. There are several ways, called Levels, to organize data across the HDDs to achieve a prescribed balance of improved performance and reliability.

6. Seagate also sold drives with model number ST3000DM001 as part of external storage systems manufactured by Seagate. For example, Seagate sold ST3000DM001 drives as part of Seagate's Backup Plus external backup drives. These were single drives housed in their own casing that communicated with a computer by USB cable, which is the most common means of connecting backup hard drive products to computer systems. Seagate also sold drives with model number ST3000DM001 as part of the FreeAgent GoFlex product.

7. The amount and pattern of use the ST3000DM001 drives received could vary widely in all of the above products and environments.

8. HDDs can be affected by the following more general sources of mechanical problems:

i. Contamination – Contamination is a non-specific term that can refer to any particles that may be introduced into the Hard Disk Assembly ("HDA") by assembled components, during the assembly process, from the tools used in assembling the HDA, or as it ages. The latter can result from Outgassing and Wear over the life of the HDD. Contamination can also refer to lubricant that is normally present on the surface of the disks (on the media) accumulating in the wrong place within a hard drive. For example, if the drive is in a high vibration environment, or if the drive is bumped or experiences a mechanical shock, this may cause the read-write head to dip closer to the media and pick up lubrication or "contamination."

ii. Outgassing – Outgassing is the release of volatile materials from the components, adhesives, and lubricants in the HDA as a gas. These can condense on other components in the HDA if not first trapped in its (activated carbon) recirculation filter. This can lead to failures if they condense on the Heads or Disks for multiple reasons of which a few are: a) increase Head to Disk separation (flying height), b) Head corrosion, c) unstable Head to Disk air-bearing, d) Head crash, or e) Disk corrosion leading to grown defects. Temperature is a key

1 driver of outgassing, and drives that users run in high temperature environments may exhibit  
2 higher problems with outgassing.

3           iii.       Wear – Wear is the result of friction between components in contact. This  
4 can create contamination as well as just consuming the useful life of the HDD. An important  
5 source of wear in the HDA is between the load/unload ramp and the load beam for the Heads  
6 when the heads are parked off the Disk. Other sources of wear are the Fluid Dynamic Bearing  
7 (“FDB”) in the spindle and the pivot bearing on the Actuator Arm. The wear products can lead to  
8 failures if they accumulate on the Heads or Disks for multiple reasons of which a few are: a) Head  
9 to Disk interference that creates grown defects (and more wear products), b) Head crash, c)  
10 increase Head to Disk separation (flying height), or d) Head position tracking errors.

11           iv.       “Random” component failures – Because no components or mechanical  
12 systems are ever perfect, a small proportion of each of the components used within hard drives  
13 will fail, either because of defects in the components or because of wear over time—leading to  
14 some fraction of HDDs failing. Put another way, in any given population of HDDs, some  
15 proportion will eventually fail, but the failing drives might have failed for many *different* reasons  
16 and causes.

17           9.       Furthermore, the ST3000DM001 drives could have been exposed to any of the  
18 following intervening, *external* factors that could cause them to fail:

19           i.       Vibration – As explained above, HDDs are complex assemblies of many  
20 parts that need to move very precisely at very high speeds. The HDDs generate rich emitted  
21 vibration frequency patterns because of their high spindle speed, spindle imbalances, rapid  
22 actuator access times, and HDD system resonant modes. Accordingly they should be adequately  
23 secured in the computer case, NAS box, or other environment in which they are used so that these  
24 vibrations are suppressed. This is even more important when many HDDs are used together  
25 because, if not properly done, the emitted vibrations will be transmitted to neighboring  
26 HDDs. These vibrations can combine constructively and be amplified by chassis resonances.  
27 This can lead to failures for multiple reasons of which a few are: a) grown defects due to  
28 undetected positioning errors while writing, b) Head to Disk interference that creates grown



defects from contamination of undetected excitation of air-bearing resonances, c) high-fly write events that created grown defects, d) Head crashes, e) unstable Head loading (LUL cycles) that create debris leading to a, b, c or d above, f) system time-out error events or slow performance since the HDD cannot position its Heads accurately (HDD does not respond).

ii. Controller Card – In certain systems, HDDs are often used in conjunction with a controller card that allows HDDs to communicate with each other and with the host computer. Changes to the firmware on the controller card can cause HDDs in the system to malfunction.

iii. Cables – HDDs must be connected to a power source and the controller card or computer motherboard by cables. If the cable used to connect an HDD to a computer is defective, this may cause connection issues, read or write failures, or otherwise cause the HDD to malfunction.

iv. System Upgrades/Updates – Apple and Microsoft constantly provide customers with computer software updates or upgrades. Apple iOS and Windows updates can cause external HDDs, such as the Backup Plus, to fail as a result of incompatibilities between the updated operating system and the device firmware interacting with the operating system.

v. Consumer or Shipper Mishandling – Any mishandling of an HDD by end users or by mail carrier services can cause HDDs to fail. Such mishandling includes dropping items on the HDD, dropping the HDD on hard surfaces, spilling liquids on the HDD, and exposing the HDD to higher or lower temperatures than the temperatures it is designed to withstand.

10. Based on my extensive professional experience with HDDs, it is my understanding that many types of mechanical failure cannot be diagnosed without physically testing and analyzing the drives.

#### **Apple Recall of ST3000DM001 Drives**

11. In June 2015, Apple issued a recall of ST3000DM001. I am aware of the Apple recall because the Customer Technical Support department is the division within Seagate responsible for managing Apple's account with Seagate. Apple reported to Seagate that it was seeing a cumulative return rate of around 5% or 6% on drives manufactured approximately two

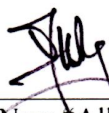
1 and one-half years earlier. If true, this would indicate an annual return rate of less than 3%. Even  
2 though other Original Equipment Manufacturers (“OEMs”) also sold the ST3000DM001 drives in  
3 their computers, I am not aware of any other OEMs that were dissatisfied with the 3TB Drives or  
4 that issued a recall.

5 I declare under penalty of perjury under the laws of California that the foregoing is true  
6 and correct.

7 Executed on this 30th day of June, 2017, at Cupertino, California.

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\_\_\_\_\_  
Sek Nam “Allen” Ng

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# **EXHIBIT 19**

**[FILED UNDER SEAL]**

**EXHIBIT 20**  
[FILED UNDER SEAL]

# **EXHIBIT 21**

**[FILED UNDER SEAL]**

## **EXHIBIT 22**

1 UNITED STATES DISTRICT COURT  
2 NORTHERN DISTRICT OF CALIFORNIA  
3 SAN JOSE DIVISION  
4

5 IN RE SEAGATE TECHNOLOGY LLC  
6 LITIGATION,  
7 \_\_\_\_\_

8 CASE NO. 5:16-CV-00523-JCS  
9 \_\_\_\_\_

10 CONSOLIDATED ACTION,  
11 \_\_\_\_\_

12 VIDEOTAPED DEPOSITION OF NIKOLAS MANAK

13 San Francisco, California

14 Tuesday, June 20, 2017  
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23 Reported by: Ashley Soevyn, CSR No. 12019

24 Job No. 2248

25 Pages 1 - 144

1 A Yes.

2 Q What is this document?

3 A It's the receipt for my order for the  
4 hard drives from Newegg, which I provided to the  
5 attorneys.

6 Q And when you reference the hard drives,  
7 what hard drives are you referring to?

8 A The two hard drives in the complaint.

9 Q There's an amount listed that says total  
10 amount 219.98. Is that the purchase price for the  
11 hard drives?

12 A Yes. It's the combined price for two of  
13 them.

14 Q If you move a little but further up it  
15 says: Minus 50. Discount for promotion code minus  
16 50.

17 A Yes.

18 Q Did you receive a discount for your  
19 purchase of the hard drives?

20 A Yes.

21 Q Do you see the serial number for the hard  
22 drives you purchased anywhere in this document?

23 A No, I don't.

24 Q And there is a date listed at the top of  
25 the document. May 16, 2013. Is this the date that

1     you purchased the hard drives?

2             A     Yes, I believe it is.

3                     MS. PAYNE: Now I'm introducing Exhibit  
4     8, which is, again, an e-mail.

5                     (Exhibit 8 marked for identification.)

6                     THE WITNESS: Okay.

7     BY MS. PAYNE:

8             Q     Have you seen this document before?

9             A     Yes.

10            Q     What is this document?

11            A     This is the receipt from Pay-pal for  
12     paying for the hard drives in the previous order.

13            Q     Did you use Pay-pal to pay for hard  
14     drives ordered from Newegg?

15            A     Yes.

16                     MS. PAYNE: This is Exhibit 9, which is  
17     another e-mail.

18                     (Exhibit 9 marked for identification.)

19                     THE WITNESS: Okay.

20     BY MS. PAYNE:

21            Q     Have you seen this document before?

22            A     Yes.

23            Q     What is this document?

24            A     This is my shipping confirmation for --  
25     wait, no. It's my sales order confirmation for my

1 type of hard drive that you had returned to Seagate?

2 A Yes. It was the same model number.

3 Q Was it a 3 terabyte Barracuda?

4 A Yes.

5 Q You testified earlier that when the hard  
6 drive failed you lost movies. What other types of  
7 information did you lose?

8 A Digitally archived copies of my music  
9 collection and a few photos. I can't remember  
10 exactly of what, but some of my photo collection was  
11 on there, and I hadn't recently synchronized it with  
12 what was on my personal computer.

13 Q Did you read any statements by Seagate  
14 about AFR prior to purchasing the Seagate internal 3  
15 terabyte hard drive?

16 A Yes, it was on their data sheet.

17 Q Did you read any statements by Seagate  
18 about the use of 3 terabyte Barracuda hard drives in  
19 RAID before purchasing the hard drives?

20 A Yes.

21 Q Where did you read those statements?

22 A On the data sheet.

23 Q Did you read any statements by Seagate  
24 about the use of 3 terabyte Barracuda hard drives in  
25 NAS before purchasing the hard drives?



1 A Yes, I did.

2 Q Did you rely on any of those statements?

3 A Yes. Both RAID and NAS were my intended  
4 usage so I relied on both of those statements.

5 Q Did you rely on statements about AFR?

6 A Yes, I did. I knew I would be using RAID  
7 zero, so there was always the possibility of data  
8 loss. So I relied on their very, very low AFR,  
9 which would mean it was very unlikely I would suffer  
10 any data loss.

11 Q Are you aware that the second  
12 consolidated amended complaint states that you read  
13 the data sheet but it does not specifically state  
14 that you relied on statements about AFR, RAID or  
15 NAS?

16 A No, I'm not aware of that.

17 Q We're finished with documents.

18 What relief are you seeking in this  
19 lawsuit?

20 A I am going to defer to the lawyers on  
21 what would be appropriate relief.

22 Q Is there a different amount that you  
23 would have paid for the Seagate 3 terabyte internal  
24 Barracudas knowing how long the drive lasted?

25 MR. SIEGEL: Objection as to form. Calls

1 I, the undersigned, a Certified Shorthand  
2 Reporter of the State of California, do hereby  
3 certify:

4 That the foregoing proceedings were taken  
5 before me at the time and place herein set forth;  
6 that any witnesses in the foregoing proceedings,  
7 prior to testifying, were duly sworn; that a record  
8 of the proceedings was made by me using machine  
9 shorthand, which was thereafter transcribed under my  
10 direction; further, that the foregoing is a true  
11 record of the testimony given.

12 I further certify I am neither financially  
13 interested in the action nor a relative or employee  
14 of any attorney or party to this action.

15 IN WITNESS WHEREOF, I have this date  
16 subscribed my name.

17  
18 Dated: \_\_\_\_\_

19  
20  
21  
22 \_\_\_\_\_  
23 ASHLEY SOEVYN  
24 CSR No. 12019  
25

# **EXHIBIT 23**

1 UNITED STATES DISTRICT COURT  
2 NORTHERN DISTRICT OF CALIFORNIA  
3 SAN FRANCISCO DIVISION  
4

5 IN RE SEAGATE TECHNOLOGY, LLC  
6 LITIGATION,

\_\_\_\_\_ No. 3:16-cv-00523 JCS

7 CONSOLIDATED ACTION  
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Videotape Deposition of Stefan Boedeker,  
taken at Four Embarcadero Center, 17th Floor,  
San Francisco, California, on Tuesday, December  
12, 2017 at 9:29 a.m.

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22 REPORTED BY:

23 Mary Hogan CSR No 05386  
24  
25

1 next summer campaign, do the consumers like mango  
2 peach better than cherry vanilla, it can be more  
3 like a product model case. I can use product  
4 analysis for that.

5 In this case I use conjoint analysis  
6 to measure the change if an attribute changes, and  
7 if that attribute belongs to something that's very  
8 important, the results will be one way, if it  
9 belongs to something that is not very important,  
10 it has a different impact.

11 My study actually showed that a RAID  
12 NAS feature, that was also part of the statement,  
13 the RAID, actually was not very important and  
14 numbers showed it.

15 Ultimately it was very, very small  
16 increase that -- that consumers -- that the price  
17 would have changed. It was pennies.

18 So that showed me that something that  
19 was not very important doesn't change demand very  
20 much, whereas something that is important in this  
21 case changed the demand a lot more.

22 Q (By Ms. McLean) How did you decide to  
23 select the features that you ultimately chose for  
24 the conjoint?

25 Capacity, connectivity, and I believe

1 I, the undersigned, a Certified Shorthand  
2 Reporter for the State of California, do hereby  
3 certify that the witness in the foregoing  
4 deposition was by me first duly sworn to testify  
5 to the truth in the cause herein entitled; that  
6 said deposition was taken at the time and places  
7 herein stated; that the testimony of said witness  
8 was reported by me and thereafter transcribed  
9 under my direction into typewriting; that the  
10 foregoing is a full, complete and true record of  
11 said testimony;

12 I further certify that I am not of  
13 counsel or attorney for either or any of the  
14 parties in the foregoing matter, nor in any way  
15 interested in the outcome of the cause herein named.

16 IN WITNESS WHEREOF, I have hereunto  
17 set my hand this 14th day of December, 2017.

18  
19 \_\_\_\_\_  
20 MARY HOGAN, CSR NO. 5386  
21  
22  
23  
24  
25

# **EXHIBIT 24**

1 UNITED STATES DISTRICT COURT  
2 NORTHERN DISTRICT OF CALIFORNIA  
3 SAN JOSE DIVISION  
4

5 IN RE SEAGATE TECHNOLOGY LLC  
6 LITIGATION,  
7 \_\_\_\_\_

8 CASE NO. 5:16-CV-00523-JCS  
9 \_\_\_\_\_

10 CONSOLIDATED ACTION,  
11 \_\_\_\_\_  
12

13 VIDEOTAPED DEPOSITION OF DENNIS CRAWFORD

14 San Francisco, California

15 Thursday, June 15, 2017  
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17  
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23 Reported by: Ashley Soevyn, CSR No. 12019

24 Job No. 2244

25 Pages 1 - 149



1 Exhibit 5 begin at paragraph 92 and go through  
2 paragraph 99; is that correct?

3 A In Exhibit 5?

4 Q Yes.

5 A 92 to 99.

6 Q Is that right?

7 A It looks right to me.

8 Q In Enders Exhibit 2 the allegations that  
9 relate to you begin at paragraph 171 and go through  
10 paragraph 187; is that correct?

11 A That's correct.

12 Q So it appears that there were more  
13 allegations added to -- about you added to Enders  
14 Exhibit 2 after the complaint was amended?

15 A Yes.

16 Q Were you involved in supplying additional  
17 information to plaintiffs' counsel for purposes of  
18 amending the complaint?

19 A I believe, from my recollection, that  
20 there were additional questions asked, and to  
21 provide additional details around, you know, the set  
22 of circumstances to better understand what happened.

23 Q In Exhibit 5 you refer to having  
24 purchased three internal Barracudas in April 2012  
25 from TigerDirect. And in Exhibit 2 from Enders you

1 I, the undersigned, a Certified Shorthand  
2 Reporter of the State of California, do hereby  
3 certify:

4 That the foregoing proceedings were taken  
5 before me at the time and place herein set forth;  
6 that any witnesses in the foregoing proceedings,  
7 prior to testifying, were duly sworn; that a record  
8 of the proceedings was made by me using machine  
9 shorthand, which was thereafter transcribed under my  
10 direction; further, that the foregoing is a true  
11 record of the testimony given.

12 I further certify I am neither financially  
13 interested in the action nor a relative or employee  
14 of any attorney or party to this action.

15 IN WITNESS WHEREOF, I have this date  
16 subscribed my name.

17  
18 Dated: \_\_\_\_\_

19  
20  
21  
22 \_\_\_\_\_  
23 ASHLEY SOEVYN  
24 CSR No. 12019  
25

# **EXHIBIT 25**

## Consumer Protection Statutes

	Class actions permitted?	Injury required?	Scienter require?	Reliance required?	Statute of limitations	Pre-suit notice required?	Remedies: Actual damages?	Remedies: Treble damages?	Remedies: Punitive damages ?	Remedies: Equitable relief?	Attorney's fees for prevailing P?	Attorney's fees for prevailing D?
<b>Alabama (Ala. Code 1975 §8-19-1, et seq.)</b>	No. Ala. Code §8-19-10(f).	Yes. Ala. Code §8-19-10(a); <i>Billions v. White and Stafford Furniture Co., Inc.</i> , 528 So.2d 878 (Ct. Civ. App. 1988).	No. Only some of the listed deceptive acts have an intent element. <i>See</i> Ala. Code §8-19-5.	Undecided.	1 year from when person should have discovered the violation and no longer than 4 years after the transaction. Ala. Code §8-19-14.	Yes. Ala. Code §8-19-10€.	Yes. Ala. Code §8-19-10(a)(1).	Yes. Ala. Code §8-19-10(a)(2).	No. Ala. Code §8-19-10(a)(2); <i>Register v. Rus of Auburn</i> , 193 F.Supp.2d 1273 (M.D. Ala. 2002).	Yes. Ala. Code §8-19-10(a)(3).	Yes. Ala. Code §8-19-10(a)(3).	Yes, if action was frivolous, bad faith, or brought for harassment. Ala. Code §8-19-10(a)(3).
<b>Alaska (Alaska Stat. §§ 45.50.471-.561)</b>	Yes. <i>See, e.g., Turner v. Alaska Comms. Sys. Long Distances, Inc.</i> , 78 P.3d 264, 266-70 (Alaska 2003).	Yes - actual loss of money or property. AS § 45.50.531(a); <i>Garrison v. Dixon</i> , 19 P.3d 1229, 1235 n.22 (Alaska 2001).	No. <i>Kenai Chrysler Ctr., Inc. v. Denison</i> , 167 P.3d 1240, 1255 (Alaska 2007).	No. <i>See</i> AS §45.50.531 (a); <i>State v. O'Neill Investigations, Inc.</i> , 609 P.2d 520, 534 (Alaska 1980).	2 years from date violation was or reasonably should have been discovered. AS 45.50.531(f).	Yes, but only before an action for injunctive relief. AS §45.50.535.	Yes. AS §45.50.531(a).	Yes, is mandatory. AS §45.50.531(a)	Yes - recoverable in addition to treble damages. AS § 45.50.531; <i>Kenai Chrysler</i> , 167 P.3d at 1260.	Yes. AS § 45.50.531 (a), 45.50.535.	Yes. AS §45.50.537.	Yes - mandatory if the action was frivolous or done to gain business advantage. AS §45.50.537 (b)-(c).
<b>Arizona (Ariz. Rev. Stat. §§ 44-1521 through 44-1534)</b>	Yes. <i>See, e.g., Ventures Edge Legal PLLC v. GoDaddy.com LLC</i> , 2016 WL 3570465 (D. Ariz. July 1, 2016).	Yes - distinct and palpable injury. <i>Fernandez v. Takata Seat Belts, Inc.</i> , 108 P.3d 917, 919 (Ariz. 2005).	Yes, but only intent for the conduct, not intent to deceive. Ariz. Rev. Stat. § 44-1522(A); <i>Kuehn v. Stanley</i> , 91 P.3d 346, 351 (Ariz. Ct. App. 2004); <i>Holeman v. Neils</i> , 803 F. Supp. 237, 242 (D. Ariz. 1992).	Yes, even if unreasonable. Ariz. Rev. Stat. § 44-1522(A); <i>Kuehn v. Stanley</i> , 91 P.3d 346, 351 (Ariz. Ct. App. 2004); <i>Holeman v. Neils</i> , 803 F. Supp. 237, 242 (D. Ariz. 1992).	1 year from when cause of action accrues. Ariz. Rev. Stat. § 12-541(5); <i>Ventures Edge Legal PLLC v. GoDaddy.com LLC</i> , 2016 WL 3570465 (D. Ariz. July 1, 2016).	No.	Yes. <i>Holeman</i> , 803 F. Supp. at 242; <i>Nataros v. Fine Arts Gallery of Scottsdale, Inc.</i> , 612 P.2d 500, 504 (Ariz. Ct. App. 1980).	No. <i>See generally</i> Ariz. Rev. Stat. §§ 44-1528, 44-1531.	Yes, but only when the conduct is wanton or reckless or involves spite or ill will. <i>Holeman</i> , 803 F. Supp. at 242-43; <i>Howell v. Midway Holdings, Inc.</i> , 362 F. Supp. 2d 1158, 1165 (D. Ariz. 2005).	Unclear if private right to equitable relief exists. Statute only allows for State Atty General to initiate. Ariz. Rev. Stat. §§ 44-1528, 44-1531.	No, only allowed for defendant if plaintiff had rejected settlement offer higher than final judgment. Ariz. Rev. Stat. § 12-341.01(A); <i>Sellinger v. Freeway Mobile Home Sales, Inc.</i> , 110 Ariz. 573 (1974).	
<b>Arkansas (A.C.A. §4-88-101, et seq.)</b>	No. A.C.A. §4-88-113(f)(1)(B).	Yes, requires proof of financial loss. A.C.A. §4-88-113(f)(1)(A), (f)(2); <i>Skalla v. Canepari</i> , 2013 Ark. 415 (2013).	No, but some of the listed unlawful acts have an intent element. A.C.A. §4-88-107.	Yes. A.C.A. §4-88-113(f)(1)(A).	5 years from the violation. A.C.A. §4-88-115.	No.	Yes. A.C.A. §4-88-113(f)(1)(A).	No. <i>See generally</i> A.C.A. §4-88-113(f)(1)(A).	No. <i>See generally</i> A.C.A. §4-88-113(f)(1)(A).	No, only can be initiated by state Attorney General. A.C.A. §4-88-113(a); <i>Baptist Health v. Murphy</i> , 2010 Ark. 358 (2010).	Yes. A.C.A. §4-88-113(f)(3).	Yes. A.C.A. §4-88-113(f)(3).

## Consumer Protection Statutes

	Class actions permitted?	Injury required?	Scienter require?	Reliance required?	Statute of limitations	Pre-suit notice required?	Remedies: Actual damages?	Remedies: Treble damages?	Remedies: Punitive damages?	Remedies: Equitable relief?	Attorney's fees for prevailing P?	Attorney's fees for prevailing D?
<b>California UCL (Cal. Bus. &amp; Prof. Code §17200, et seq.)</b>	Yes. Cal.Bus. & Prof. Code § 17203.	Yes. Cal.Bus. & Prof. Code §§17203, 17204	No. <i>Cortez v. Purolator Air Filtration Products Co.</i> , 999 P.2d 706 (Cal. 2000).	Yes, by named plaintiffs. <i>In re Tobacco II Cases</i> , 207 P.3d 20 (Cal. 2009).	4 years from when cause of action accrues. Cal.Bus. & Prof. Code §17208.	No.	Equitable relief is the only available remedy under the UCL. Cal. Bus. & Prof. Code §17203; <i>Korea Supply Co. v. Lockheed Martin Corp.</i> , 63 P.3d 937 (Cal. 2003).				No, unless plaintiffs establish entitlement to fees as a private attorney general under Cal. C.C.P. § 1021.5. <i>Yanting Zhang v. Super. Ct.</i> , 57 Cal.4th 163, 167 n.4 (2013).	
<b>California FAL (Cal. Bus. &amp; Prof. Code §17500, et seq.)</b>	Yes. Cal.Bus. & Prof. Code § 17535.	Yes. Cal.Bus. & Prof. Code §17535.	Yes. Cal.Bus. & Prof. Code §17500.	Yes. <i>In re Ferrero Litigation</i> , 794 F.Supp.2d 1107 (S.D. Cal. 2011).	3 years. Cal. C.C.P. §338; <i>Ries v. Arizona Beverages USA LLC</i> , 287 F.R.D. 523 (N.D. Cal. 2012).	No.	Equitable relief is the only available remedy under the FAL. Cal. Bus. & Prof. Code § 17535; <i>Benson v. Southern California Auto Sales, Inc.</i> , 239 Cal.App.4th 1198 (2015).				No, unless plaintiffs establish entitlement to fees as a private attorney general under Cal. C.C.P. § 1021.5. <i>Benson v. S. Cal. Auto Sales, Inc.</i> , 239 Cal.App.4th 1198, 1208 (2015).	
<b>California - CLRA (Cal. Civ. Code § 1750, et seq.)</b>	Yes. Cal. Civ. Code §§ 1752, 1781(a).	Yes. Cal. Civ. Code § 1781(a).	No. <i>Mazza v. Am. Honda Motor Co.</i> , 666 F.3d 581, 591 (9th Cir. 2012).	Yes. <i>Tucker v. Pac. Bell Mobile Servs.</i> , 208 Cal. App. 4th 201 (2012).	3 years from date of wrongful act. Cal. Civ. Code § 1783.	Yes, at least 30 days' notice. Cal. Civ. Code § 1782.	Yes. Cal. Civ. Code § 1780(a)(1).	No.	Yes. Cal. Civ. Code § 1780(a)(4).	Yes. Cal. Civ. Code § 1780(a)(2)-(3).	Yes. Cal. Civ. Code § 1780(e).	Yes, if plaintiff's action not in good faith. Cal. Civ. Code § 1780(e).
<b>Colorado (Colo. Rev. Stat. §§ 6-1-101, et seq.)</b>	No, private class actions for damages are prohibited. C. R. S. A. § 6-1-113(2); <i>Friedman v. Dollar Thrifty Automotive Group, Inc.</i> , 2015 WL 4036319 (D. Colo. July 1, 2015).	Yes, and must also show injury to public interest. C.R.S.A. § 6-1-113(1)(a); <i>Rhino Linings USA, Inc. v. Rocky Mountain Rhino Lining, Inc.</i> , 62 P.3d 142 (Colo. 2003).	No, but many of the listed unlawful acts have an intent element. C.R.S.A. §6-1-105	Causation required. <i>Crowe v. Tull</i> , 126 P.3d 196 (Colo. 2006).	3 years from date violation was or reasonably could have been discovered. C.R.S.A. § 6-1-115.	No.	Yes, but not for class actions. C.R.S.A. § 6-1-113(2)(a).	Yes, but not for class actions. C.R.S.A. § 6-1-113(2)(a).	No. <i>See generally</i> C.R.S.A. § 6-1-113(2).	No. <i>See generally</i> C.R.S.A. § 6-1-113(2).	Yes, but not for class actions. C.R.S.A. § 6-1-113(2)(b).	Yes – if claims are “groundless,” in bad faith, or meant to harass. C.R.S.A. § 6-1-113(3).
<b>Connecticut (Conn. Gen. Stat. § 42-110a, et seq.)</b>	Yes. Conn. Gen. Stat. § 42-110g(b).	Yes, and must show that damages are capable of being discovered, observed, or established. Conn. Gen. Stat. § 42-110g(a); <i>Lentini v. Fidelity Nat. Title Ins. Co. of New York</i> , 479 F. Supp. 2d 292 (D. Conn. 2007).	No. <i>H&amp;L Chevrolet, Inc. v. Berkley Ins. Co.</i> , 110 Conn.App. 428 (Conn. App. Ct. 2008).	No. <i>Hinchcliffe v. American Motors Corp.</i> , 440 A.2d 810 (Conn. 1981).	3 years after date of violation. <i>See</i> Conn. Gen. Stat. § 42-110g(f).	No.	Yes. Conn. Gen. Stat. § 42-110g(a).	No. <i>See generally</i> Conn. Gen. Stat. § 42-110g.	Yes where reckless indifference to the rights of others is established. Conn. Gen. Stat. § 42-110g(a); <i>Fabri v. United Tech. Int'l, Inc.</i> , 387 F.3d 109 (2d Cir. 2004).	Yes. Conn. Gen. Stat. §§ 42-110g(a), (d).	Yes. Conn. Gen. Stat. § 42-110g(d).	No. <i>See generally</i> Conn. Gen. Stat. § 42-110g(d).

## Consumer Protection Statutes

	Class actions permitted?	Injury required?	Scienter require?	Reliance required?	Statute of limitations	Pre-suit notice required?	Remedies: Actual damages?	Remedies: Treble damages?	Remedies: Punitive damages ?	Remedies: Equitable relief?	Attorney's fees for prevailing P?	Attorney's fees for prevailing D?
<b>Delaware (6 Del. Code § 2511, et seq.)</b>	Yes.	Yes. Del.C. §2525(a).	No, only intent for omission/concealment. Del. C. § 2513(a); <i>Stephenson v. Capano Dev., Inc.</i> , 462 A.2d 1069 (Del. 1983); <i>see also Brady v. Publishers Clearing House, Inc. v. Celotex Corp.</i> , 503 A.2d 646 (Del. Sup. 1985).	No. <i>Stephenson v. Capano Dev., Inc.</i> , 462 A.2d 1069 (Del. 1983); <i>see also Brady v. Publishers Clearing House, Inc. v. Celotex Corp.</i> , 503 A.2d 646 (Del. Ch. 2001)	3 years from date violation was or reasonably could have been discovered. 10 Del. C. § 1806; <i>Pack &amp; Process</i> , 503 A.2d at 650.	No.	Yes. <i>Stephenson</i> , 462 A.2d at 1076.	No.	Yes, for gross, oppressive, or aggravated fraud. <i>Stephenson</i> , 462 A.2d at 1076-77.	Yes, but only when necessary. Del. C. § 2523.	No. <i>DiSimplico v. Equitable Variable Life Ins. Co.</i> , 1988 WL 15394 (De. Sup. Jan. 29, 1988).	No. <i>DiSimplico v. Equitable Variable Life Ins. Co.</i> , 1988 WL 15394 (De. Sup. Jan. 29, 1988).
<b>District of Columbia (D.C. Code § 28-3901 to 28-3913)</b>	Yes. DC ST §28-3905(k)(1)(B); <i>see, e.g., Dist. Cablevision Ltd. P'ship v. Bassin</i> , 828 A.2d 714 (D.C. 2003).	No. DC ST §§ 28-3904, 28-3905(k); <i>Wells</i> , 210 F.R.D. at 8.	No. <i>Beck v. Test Masters Educ. Servs.</i> , 994 F. Supp. 2d 90, 93-94 (D.D.C. 2013) (citing <i>Cannon v. Wells Fargo Bank, N.A.</i> , 926 F.Supp. 2d 152, 173-74 (D.D.C. 2013)).	No. D.C. Code §§ 28-3904, 28-3905(k); <i>Wells</i> , 210 F.R.D. at 8.	3 years from date violation was or reasonably could have been discovered. D.C. Code § 12-301(8); <i>Murray v. Wells Fargo Home Mortg.</i> , 953 A.2d 308 (D.C. 2008).	No.	No, treble damages are automatic. D.C. Code § 28-3905(k)(1); <i>Williams v. First Gov't Mortgage &amp; Investors Corp.</i> , 225 F.3d 738, 745 (D.C. Cir. 2000).	Yes. DC ST § 28-3905(k)(2).	Yes. D.C. Code § 28-3905(k)(2).	Yes. DC ST § 28-3905(k)(2).	Yes. DC ST § 28-3905(k)(2).	No. <i>See generally</i> D.C. Code § 28-3905(k)(1).
<b>Florida (Fla. Stat. §§ 501.201, et seq.)</b>	Yes. <i>Egwuatu v. South Lubes, Inc.</i> , 976 So.2d 50 (Fla. Dist. Ct. App. 2008).	Yes, but injury must not have been reasonably avoidable. F.S.A. §501.211; <i>Porsche Cars N. Amer., Inc. v. Diamond</i> , 140 So.3d 1090 (Fla. Dist. Ct. App. 2014); <i>McGuire v. Ryland Group, Inc.</i> , 497 F. Supp. 2d 1347, 1355 (M.D. Fla. 2007).	No. <i>See generally Porsche Cars N. Amer., Inc. v. Diamond</i> , 140 So.3d 1090 (Fla. Dist. Ct. App. 2014);	Courts are split. Compare <i>Davis v. Powertel, Inc.</i> , 776 So. 2d 971, 973 (Fla. Dist. Ct. App. 2000) with <i>Mac-Gray Serv., Inc. v. DeGeorge</i> , 913 So. 2d 630, 634 (Fla. Dist. Ct. App. 2005).	4 years after violation. F.S.A. §95.11; <i>Yusuf Mohamad Excavation, Inc. v. Ringhaver Equip., Co.</i> , 793 So. 2d 1127 (Fla. Dist. Ct. App. 2001).	No.	Yes. F.S.A. §501.211(2).	No. <i>See generally</i> F.S.A. § 501.211.	No. <i>Rollins, Inc. v. Heller</i> , 454 So. 2d 580, 585 (Fla. Dist. Ct. App. 1984).	Yes. F.S.A. § 501.211(1).	Yes. F.S.A. §§ 501.2105(1), 501.211(2).	
<b>Georgia - GFBPA (O.C.G.A. § 10-1-390, et seq.)</b>	No. Ga. Code Ann. § 10-1-399(a); <i>Honig v. Comcast of Georgia</i> , 537 F. Supp. 2d 1277 (N.D. Ga. 2008).	Yes. Ga. Code Ann. § 10-1-399(a); <i>Regency Nissan, Inc. v. Taylor</i> , 391 S.E.2d 467, 470 (Ga. Ct. App. 1990).	No. <i>Regency Nissan</i> , 391 S.E.2d at 470; <i>Henderson v. Gandy</i> , 270 Ga. App. 827 (2004).	Yes. <i>Crown Ford, Inc. v. Crawford</i> , 221 Ga. App. 881 (1996); <i>Zeeman v. Black</i> , 156 Ga. App. 82 (1980).	2 years from date violation reasonably should have been discovered. Ga. Code Ann. § 10-1-401(a)(1).	Yes, 30 days before commencing suit. Ga. Code Ann. §10-1-399(b).	Yes. Ga. Code Ann. § 10-1-399(a); <i>Conseco Fin. Serv. Corp. v. Hill</i> , 556 S.E.2d 468, 473 (Ga. Ct. App. 2001).	Yes, only for intentional violations. Ga. Code Ann. § 10-1-399(c); <i>Conseco Fin. Serv. Corp.</i> , 556 S.E.2d at 473.	Yes, for intentional violations. Ga. Code Ann. § 10-1-399(a); <i>Conseco Fin. Serv. Corp.</i> , 556 S.E.2d at 473.	Yes. Ga. Code Ann. §10-1-399(a).	Yes, but may be limited by rejection of reasonable settlement offer post-notice. Ga. Code Ann. § 10-1-399(d).	Yes, for bad faith or harassment. Ga. Code Ann. § 10-1-399(d).

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<b>Georgia - UDTPA (O.C.G.A. § 10-1-370, et seq.)</b>	Yes.	No, only a likelihood of future injury. Ga. Code Ann. § 10-1-373(a).	No. Ga. Code Ann. §10-1-373(a).	No. Ga. Code Ann. § 10-1-372(b).	4 years. Ga. Code Ann. § 9-3-31; <i>Kason Indus., Inc. v. Component Hardware Group, Inc.</i> , 120 F.3d 1199 (11th Cir. 1997).	No.	Only injunctive relief is available. Ga. Code Ann. § 10-1-373(a)-(c); <i>Catrett v. Landmark Dodge, Inc.</i> , 560 S.E.2d 101 (Ga. Ct. App. 2002); <i>Moore- Davis Motors, Inc. v. Joyner</i> , 556 S.E.2d 137 (Ga. Ct. App. 2001).				Yes, if willful and knowingly deceptive. Ga. Code Ann. §10-1-373(b).	Yes, if groundless action. Ga. Code Ann. §10-1-373(b).
<b>Hawaii (Haw. Rev. Stat. § 480-2)</b>	Yes. HRS § 480-13(c); <i>see, e.g., Nakamura v. Countrywide Home Loans, Inc.</i> , 122 Hawai'i 238 (Ct. App. 2010).	Yes, but not if one is only seeking injunctive relief.. Haw. Re. Stat. §§ 480-13, 481A-4.	No. <i>See</i> Haw. Rev. Stat. §§ 480-2, 481A-4; <i>Davis v. Wholesale Motors</i> , 949 P.2d 1026 (Haw. Ct. App. 1997).	Causation required <i>See</i> Haw. Rev. Stat. § 480-13; <i>Sambor v. Omnia Credit Services, Inc.</i> , 183 F. Supp. 2d 1234 (D. Haw. 2002).	4 years from date cause of action accrues. HRS § 480-24.	No.	Yes. HRS § 480-13(b)(1).	Yes. HRS § 480-13(b)(1).	No, limited to just treble damages. <i>Zanakis- Pico v. Cutter Dodge, Inc.</i> , 47 P.3d 1222 (Haw. 2002).	Yes. HRS § 480-13(b)(2).	Yes. Haw. Rev. Stat. §§ 480-13(b)(1)-(2).	No. <i>See generally</i> Haw. Rev. Stat. § 480-13.
<b>Idaho (I.C. §48-601, et seq.)</b>	Yes. I.C. §48-608(1).	Yes. I.C. §48-608(1).	No. <i>State ex rel. Kidwell v. Master Distributors, Inc.</i> , 101 Idaho 447 (1980).	No. <i>In re Edwards</i> , 233 B.R. 461 (Bankr. D. Idaho 1999).	2 years from date cause of action accrues. I.C. §48-619.	No.	Yes, but for class actions, capped at \$1,000. I.C. § 48-608(1).	No. <i>See generally</i> I.C. §48-608(1).	Yes, for repeated or flagrant violations. I.C. §48-608(1).	Yes. I.C. §48-608(1).	Yes. I.C. §48-608(5).	Yes, if action is spurious or brought for harassment. I.C. §48-608(5).
<b>Illinois - CFA (815 ILCS 505/1-505/12)</b>	Yes. <i>See, e.g., Miner v. Gillette Co.</i> , 87 Ill. 2d 7 (1981); <i>Avery v. State Farm Mut. Auto Ins. Co.</i> , 835 N.E.2d 801 (Ill. 2005).	Yes. 815 ILCS 505/10a; <i>Oliveira v. Amoco Oil Co.</i> , 201 Ill. 2d 134, 155 (2002).	Yes, intent that consumer rely on the deception. <i>Thrasher-Lyon v. Illinois Farmers Ins. Co.</i> , 861 F.Supp.2d 898 (N.D. Ill. 2012).	No. <i>Empire Home Services, Inc. v. CarpetAmerica, Inc.</i> , 653 N.E.2d 852 (Ill. Ct. App. 1995).	3 years after cause of action accrues. 815 ILCS 505/10a(e).	No.	Yes. 815 ILCS 505/10a(a).	No. <i>Mulligan v. QVC, Inc.</i> , 382 Ill. App.3d 620, (2008).	Yes. <i>Dubey v. Public Storage, Inc.</i> , 918 N.E.2d 265 (Ill. App. Ct. 2009).	Yes. 815 ILCS 505/10a(c).	Yes. 815 ILCS 505/10a(c).	
<b>Illinois - UDTPA (815 ILCS 510/1-510/7)</b>	Yes.	No, only a likelihood of future injury. 815 ILCS 510/3.	No. 815 ILCS 510/3.	No. 815 ILCS 510/3.	5 years. <i>Second Chance Body Armor, Inc. v. American Body Armor, Inc.</i> , 1996 WL 568794 (N.D. Ill. Sept. 30, 1996).		Injunctive relief is the only available remedy under the UDTPA. 815 ILCS 510/3.				Yes, for willful deception. 815 ILCS 510/3.	No. <i>See generally</i> 815 ILCS 510/3.

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<b>Indiana (Ind. Code §§ 24-5-0.5-3(a)(1)-(18))</b>	Yes. Ind. Code § 24-5-0.5-4(b).	Yes. Ind. Code § 24-5-0.5-4(a).	Yes. <i>McKinney v. State</i> , 693 N.E.2d 65 (Ind. 1998).	Yes. Ind. Code § 24-5-0.5-4(a).	2 years from occurrence of deceptive act. Ind. Code § 24-5-0.5-5(b).	Yes. Ind. Code § 24-5-0.5.	Yes. Ind. Code § 24-5-0.5-4(a).	Yes. Ind. Code § 24-5-0.5-4(a).	No. <i>See generally</i> Ind. Code § 24-5-0.5--4(a).	No, only the Attorney General can bring an action for equitable relief. <i>See</i> Ind. Code § 24-5-0.5-4(c).	Yes. Ind. Code § 24-5-0.5-4(a).	
<b>Iowa (I.C.A. §714.16)</b>	I.C.A. §714.16 does not provide a private cause of action to enforce its consumer fraud law.											
<b>Kansas (Kan. Stat. § 50-623, et seq.)</b>	Yes. K.S.A. § 50-634.	Yes. K.S.A. § 50-634(c)-(d); <i>Finstad v. Washburn Univ. of Topeka</i> , 845 P.2d 685 (Kan. 1993).	No. <i>William v. Ewen</i> , 634 P.2d 1061 (Kan. 1981).	Yes. <i>Finstad</i> , 845 P.2d at 689-91.	3 years after date of violation. K.S.A. § 60-512(2); <i>Alexander v. Certified Master Builders Corp.</i> , 1 P.3d 899, 908 (Kan. 2000).	No.	Yes, but only for acts listed in K.S.A. §§50-26, 27, 40. K.S.A. §§ 50-634(d)(1).	No. <i>See Equitable Life Leasing Corp. v. Abbick</i> , 757 P.2d 304 (Kan. 1988).	No, must come from a separate cause of action. <i>See Equitable Life Leasing Corp. v. Abbick</i> , 757 P.2d 304 (Kan. 1988).	Yes. K.S.A. §§ 50-634(a)(1)-(2), (c).	Yes. K.S.A. § 50-634(e).	Yes, if plaintiff brought or maintained an action they knew to be groundless. K.S.A. § 50-634(e).
<b>Kentucky (KRS §367.110, et seq.)</b>	Yes.	Yes. KRS §367.220(1).	Yes, must show at least gross negligence. <i>Sparks v. Re/Max Allstar Realty, Inc.</i> , 55 S.W.3d 343 (2000).	No. <i>Corder v. Ford Motor Co.</i> , 869 F.Supp.2d 835 (W.D. Ky. 2012).	Within 2 years of violation. KRS §367.220(5).	No.	Yes. KRS §367.220(1).	No. <i>See generally</i> KRS §367.220(1).	Yes. KRS §367.220(1).	Yes. KRS §367.220(1).	Yes. KRS §367.220(3).	
<b>Louisiana (La. Rev. Stat. § 51:1405, et seq.)</b>	No. La. Rev. Stat. §§ 51:1409(A); <i>Iberia Credit Bureau, Inc. v. Cingular Wireless LLC</i> , 379 F.3d 159 (5 <sup>th</sup> Cir. 2004).	Yes. La. Rev. Stat. § 51:1409(A).	Yes - more than mere negligence. <i>Marshall v. Citicorp Mortg., Inc.</i> , 601 So. 2d 669 (La. Ct. App. 1992).	No, but must prove causation. La. Rev. Stat. § 51:1409(A).	1 year from date of transaction giving rise to action. La. Rev. Stat. § 51:1409(E).	No.	Yes. La. Rev. Stat. § 51:1409(A).	Yes – for “knowing” violations after defendant is put on notice by the Attorney General. La. Rev. Stat. § 51:1409(A).	No. La. Rev. Stat. § 51:1409(A).	No. La. Rev. Stat. § 51:1409; <i>Michaelson v. Motwani</i> , 372 So.2d 726 (La. Ct. App. 1979).	Yes. La. Rev. Stat. § 51:1409(A).	Yes, if groundless and in bad faith. La. Rev. Stat. § 51:1409(A).



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<b>Maine (5 M.R.S.A. §205, et seq.)</b>	Yes. <i>See, e.g., LaRocque ex rel. Spang v. TRS Recovery Services, Inc.</i> , 285 F.R.D. 139 (D. Me. 2012).	Yes. 5 M.R.S.A. §213(1).	No. <i>State v. Weinschenk</i> , 868 A.2d 200 (Me. 2005).	Yes. <i>GXG Management, LLC v. Young Bros. and Co., Inc.</i> , 457 F.Supp.2d 47 (D. Me. 2006).	6 years. 14 M.R.S.A. §752; <i>State v. Bob Chambers Ford, Inc.</i> , 522 A.2d 362 (Me. 1987).	Yes. 5 M.R.S.A. §213(1-A).	Yes, but only if the purchase was for personal purposes. 5 M.R.S.A. §213(1).	No. <i>See generally</i> 5 M.R.S.A. §213.	Unclear.	Yes. 5 M.R.S.A. §213(1).	Yes. 5 M.R.S.A. §213(2).	No. <i>See generally</i> M.R.S.A. §213.
<b>Maryland (MD Code, Commercial Law §13-101, et seq.)</b>	Yes. <i>See, e.g., Green v. H&amp;R Block, Inc.</i> , 735 A.2d 1039 (Md. Ct. App. 1999).	Yes. MD Code , Commercial Law, §13-408(a).	No. <i>Allen v. Bank of America, N.A.</i> , 933 F.Supp.2d 716 (D. Md. 2013).	Yes, if for misrepresentation. <i>Bank of America, N.A. v. Jill P. Mitchell Living Trust</i> , 822 F.Supp.2d 505 (D. Md. 2011).	3 years. MD Code , Courts and Judicial proceeding, §5-101; <i>Greene Tree Home Owners Assn. v. Greene Tree Associates</i> , 749 A.2d 806 (Md. Ct. App. 2000).	No.	Yes. MD Code , Commercial Law, §13-408(a).	No. <i>See generally</i> MD Code , Commercial Law, §13-408.	No. <i>Frazier v. Castle Ford, Ltd.</i> , 59 A.3d 1016 (Md. Ct. App. 2013).	Only restitution. MD Code , Commercial Law, §13-408(a); <i>Hallowell v. Citaramanis</i> , 88 Md. App. 160 (Md. Ct. Spect. App. 1991).	Yes. MD Code , Commercial Law, §13-408(b).	Yes, if bad faith or frivolous suit. MD Code , Commercial Law, §13-408(c).

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<b>Massachusetts (M.G.L.A. 93A §1, et seq.)</b>	Yes. M.G.L.A. 93A §9(2).	Yes, can be non-economic. <i>Bellerman v. Fitchburg Gas and Elec. Light Co.</i> , 54 N.E.3d 1106 (Mass. 2016).	No. <i>Aspinall v. Philip Morris Companies, Inc.</i> , 813 N.E.2d 476 (Mass. 2004).	No, but causation required. <i>Heller Financial v. Insurance co. of North America</i> , 573 N.E.2d 8 (Mass. 1991).	4 years. M.G.L.A. 260 §5A.	Yes. M.G.L.A. 93A §9(3).	Yes. M.G.L.A. 93A §9(1), (3).	Yes, if willful and knowing violation. M.G.L.A. 93A §9(3).	Limited to treble damages. M.G.L.A. 93A §9(3).	Yes. M.G.L.A. 93A §9(1).	Yes, unless plaintiff had rejected earlier reasonable settlement offer. M.G.L.A. 93A §9 (3), (4).	No. <i>See generally</i> M.G.L.A. 93A §(4).
<b>Michigan (M.C.L.A. 445.901, et seq.)</b>	Yes, but limited to unfair acts listed in Section 3. M.C.L.A. 445.911(3).	Yes, for damages. M.C.L.A. 445.911(2), (3).	Yes. <i>In re OnStar Contract Litigation</i> , 278 F.R.D. 352 (E.D. Mich. 2011).	No, only required for some of the listed unfair acts. <i>Evans v. Ameriquest Mortg. Co.</i> , 2003 WL 734169 (Mich. Ct. App. Mar. 4, 2003).	6 years after the act or 1 year after the last payment made in the transaction, whichever is later. M.C.L.A. 445.911 (7).	No. <i>See generally</i> M.C.L.A. 445.911.	Yes. M.C.L.A. 445.911(2), (3).	No. <i>See generally</i> M.C.L.A. 445.911.	Not for class actions. M.C.L.A. 445.911(3); <i>Peters v. Cars to Go, Inc.</i> , 184 F.R.D. 270 (W.D. Mich. 1998).	Yes. M.C.L.A. 445.911(1).	Not for class actions. <i>See</i> M.C.L.A. 445.911(2), (3); <i>Gavriles v. Verizon Wireless</i> , 194 F.Supp.2d 674 (E.D. Mich. 2002).	No. <i>See generally</i> M.C.L.A. 445.911.

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<b>Minnesota – UDTPA (Minn. Stat. §§ 325D.43-325D.48)</b>	Yes. <i>See, e.g., Schlink v. Edina Realty Title</i> , No. CT 02-018380, 2003 WL 23786984 (Minn. Dist. Ct. Sept. 9, 2003).	Likelihood of future injury; past injuries not actionable. <i>I-Systems, Inc. v. Softwares, Inc.</i> , No. Civ. 02-1951 JRTFLN, 2004 WL 742082 (D. Minn. Mar. 29, 2004).	No. M.S.A. § 325D.45(1).	No. <i>Thompson v. Am. Tobacco Co., Inc.</i> , 189 F.R.D. 544 (D. Minn. 1999).	6 years from date of sale. Minn. Stat. § 541.05; <i>Tuttle v. Lorillard Tobacco Co.</i> , 377 F.3d 917, 926 (8 <sup>th</sup> Cir. 2004).	No.	No - the UDTPA provides injunctive relief only. M.S.A. § 325D.45; <i>Dennis Simmons, D.D.S, P.A. v. Modern Aero, Inc.</i> , 603 N.W.2d 336 (Minn. Ct. App. 1999).			Yes. M.S.A. § 325D.45(1).	Yes, only if defendant willfully engaged in the trade practice knowing it to be deceptive. M.S.A. § 325D.45(2).	Yes, if plaintiff knew suit was groundless. M.S.A. § 325D.45(2).
<b>Minnesota - CFA (Minn. Stat. §§ 325F.68-325F.70), FSAA (Minn. Stat. § 325F.67)</b>	Yes. <i>See, e.g., Curtis v. Philip Morris Cos., Inc.</i> , No. PI 01-018042, 2004 WL 2776228 (D. Minn. Nov. 29, 2004).	Yes. <i>Buetow v. A.L.S. Enterprises, Inc.</i> , 650 F.3d 1178 (8 <sup>th</sup> Cir. 2011).	Yes. Minn. Stat. § 325F.69.	Yes. <i>Group Health Plan, Inc. v. Philip Morris, Inc.</i> , 621 N.W.2d 2, 14 (Minn. 2001); <i>Higgins v. Harold-Chevrolet-Geo, Inc.</i> , No. A04-596, 2004 WL 2660923, at *3-4 (Minn. Ct. App. Nov. 23, 2004).	6 years from date of sale. Minn. Stat. § 541.05; <i>Tuttle v. Lorillard Tobacco Co.</i> , 377 F.3d 917, 926 (2004).	No.	Yes. Minn. Stat. § 8.31(3a).	No. <i>See generally</i> Minn. Stat. § 8.31(3a).	Yes. <i>Wexler v. Brothers Entertainment Group, Inc.</i> , 457 N.W.2d 218 (Minn. Ct. App. 1990).	Yes, but not for past injury. <i>Ponzo v. Affordable Homes of Rochester, LLC</i> , No. A04-2234, 2005 WL 1804644, at *4 (Minn. Ct. App. Aug. 2, 2005).	Only for prevailing plaintiff. Minn. Stat. § 8.31(3a).	

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<b>Mississippi (Miss. Code Ann. §75-24-1, et seq.)</b>	No. Miss. Code Ann. §75-24-15(4).	Yes. Miss. Code Ann. §75-24-15(1).	No. Miss. Code Ann. §75-24-3; <i>In re Mississippi Medicaid Pharmaceutical Average Wholesale Price Litigation</i> , 190 So.3d 829 (Miss. 2015).	Unclear, but practice must be "likely to cause" injury. <i>In re Mississippi Medicaid Pharmaceutical Average Wholesale Price Litigation</i> , 190 So.3d 829 (Miss. 2015).	None specifically listed for the statute. Would need to use most analogous cause of action.	Yes, must go through informal dispute settlement program first. Miss. Code Ann. §75-24-15(2).	Yes. Miss. Code Ann. §75-24-15(1).	No. <i>See generally</i> Miss. Code Ann. §75-24-15(1).	Unclear.	No, can only be brought by state Attorney General. Miss. Code Ann. §75-24-9.	Yes, but only prevailing defendant is entitled to it. Plaintiff's fees awarded based on court's discretion. Miss. Code Ann. §75-24-15; <i>Wilson v. William Hall Chevrolet, Inc.</i> , 871 F.Supp.279 (S.D. Miss. 1994).	
<b>Missouri (V.A.M.S. 407.010, et seq.)</b>	Yes. V.A.M.S. §407.025(2); <i>see, e.g., Plubell v. Merck &amp; Co., Inc.</i> , 289 S.W.3d 707 (Mo. Ct. App. 2009).	Yes. V.A.M.S. § 407.025(1); <i>Schriener v. Quicken Loans</i> , 774 F.3d 442 (8 <sup>th</sup> Cir. 2014).	No. <i>Murphy v. Stonewall Kitchen, LLC</i> , 503 S.W.3d 308 (Mo. Ct. App. 2016); <i>State ex rel. Webster v. AreaCo Inv. Co.</i> , 756 S.W.2d 633 (Mo. Ct. App. 1988).	No. <i>Murphy v. Stonewall Kitchen, LLC</i> , 503 S.W.3d 308 (Mo. Ct. App. 2016).	5 years from time plaintiff sustained damage from the unfair practice. V.A.M.S. § 516.120(2); <i>Boulds v. Chase Auto Fin. Corp.</i> , 266 S.W.3d 847 (Mo. Ct. App. 2008).	No.	Yes. V.A.M.S. § 407.025(1).	No. <i>See generally</i> V.A.M.S. § 407.025(1).	Yes. <i>Conway v. CitiMortgage, Inc.</i> , 438 S.W.3d 410 (Mo. 2014).	Yes. V.A.M.S. §407.025(2).	Yes. V.A.M.S. §407.025(2); <i>Arcese v. Daniel Schmitt &amp; Company</i> , 504 S.W.3d 772 (Mo. Ct. App. 2016).	

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<b>Montana</b> ( <b>Mont. Code § 30-14-101, et seq.</b> )	No. Mont. Code § 30-14-133(1).	Yes. Mont. Code § 30-14-133(1).	No. <i>WLW Realty Partners, LLC v. Continental Partners VIII, LLC</i> , 381 Mont. 333, 360 P.3d 1112 (2015).	Yes. <i>Anderson v. ReconTrust Company, N.A.</i> , 2017 WL 6498065 (Dec. 19, 2017).	2 years from date violation should have been reasonably discovered. Mont. Code § 27-2-211; <i>Osterman v. Sears, Roebuck &amp; Co.</i> , 318 Mont. 342, 80 P.3d 435 (2003).	No.	Yes. Mont. Code § 30-14-133(1).	Yes. Mont. Code § 30-14-133(1).	Yes, but the statutory treble damages are not punitive. If wants to add additional punitive damages on top of treble damages, must show fraud or malice and cannot exceed \$10 million. <i>Plath v. Schonrock</i> , 314 Mont. 101, 64 P.3d 984 (2003); Mont. Code § 27-1-220; Mont. Code § 27-1-221.	Yes. Mont. Code § 30-14-133(1).	Yes, but for prevailing defendants, need to show plaintiffs' action was frivolous, unreasonable, or without foundation. Mont. Code § 30-14-133(3); <i>Tripp v. Jeld-Wen, Inc.</i> , 327 Mont. 146, 112 P.3d 1018 (2005).	
<b>Nebraska</b> ( <b>Neb. Rev. Stat. § 59-1601, et seq.</b> ) ( <b>Consumer Protection Act</b> )	Yes. Neb. Rev. Stat. § 25-319.	Yes, and must also show that the act affects the public interest. <i>Nelson v. Lusterstone Surfacing Co.</i> , 258 Neb. 678, 605 N.W.2d 136 (2000).	No. Neb. Rev. Stat. § 59-1609.	Unclear.	4 years from accrual of cause of action. Neb. Rev. Stat. § 59-1612.	No.	Yes. Neb. Rev. Stat. § 59-1609.	No, but the court can increase the award up to \$1000 more to match actual damages. Neb. Rev. Stat. § 59-1609.	Unclear.	Yes. Neb. Rev. Stat. § 59-1608.	Yes. Neb. Rev. Stat. § 59-1609.	
<b>Nebraska</b> ( <b>Neb. Rev. Stat. § 87-301, et seq.</b> ) ( <b>Uniform Deceptive Trade Practices Act</b> )	Yes. Neb. Rev. Stat. § 25-319.	No. Neb. Rev. Stat. § 87-303.	No. Neb. Rev. Stat. § 87-303.	No. Neb. Rev. Stat. § 87-303.	Four years from the date of purchase. Neb. Rev. Stat. § 87-303.10.	No.	No. Neb. Rev. Stat. § 87-303.	No. Neb. Rev. Stat. § 87-303.	No. Neb. Rev. Stat. § 87-303.	Yes. Neb. Rev. Stat. § 87-303.	Yes. Neb. Rev. Stat. § 87-303.	

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<b>Nevada (Nev. Rev. Stat. § 41.600)</b>	Yes. <i>See Sobel v. Hertz Corp.</i> , 674 Fed.Appx. 663 (9 <sup>th</sup> Cir. 2017).	Yes. <i>Sattari v. Wash. Mut.</i> , 475 Fed. Appx. 648, 648 (9th Cir. 2011).	Most of the prohibited acts' definitions include an intent requirement. <i>See</i> Nev. Rev. Stat. §§ 598.0915-598.0925; 41.600(2).	Causation required <i>Sattari</i> , 475 Fed. Appx. at 648.	4 years from date violation was or could have been reasonably discovered. Nev. Rev. Stat. § 11.190(2)(d).	No.	Yes. Nev. Rev. Stat. § 41.600(3)(a)-(b).	No. <i>See generally</i> Nev. Rev. Stat. § 41.600(3)(a)-(b).	No. <i>See generally</i> Nev. Rev. Stat. § 41.600(3)(a)-(b).	Yes. Nev. Rev. Stat. § 41.600(2).	Yes. Nev. Rev. Stat. § 41.600(3)(a)-(b).	
<b>New Hampshire (RSA 358-A:1, et seq.)</b>	Yes. RSA § 358-A:10-a; <i>LaChance v. U.S. Smokeless Tobacco Co.</i> , 156 N.H. 88, 931 A.2d 571 (2007).	Yes. RSA § 358-A:10.	No. RSA § 358-A:10; <i>Barrows v. Boles</i> , 687 A.2d 979, 986-87 (N.H. 1996).	Causation required, but not reliance. <i>Mulligan v. Choice Mortgage Corp. USA</i> , 1998 WL 544431 (D.N.H. Aug. 11, 1998).	3 years from date violation was or reasonably could have been discovered. RSA § 358-A:3(IV-a).	No.	Yes. RSA § 358-A:10.	Yes, if willful and knowing violation. RSA § 358-A:10.	No. RSA § 358-A:10.	Yes. RSA § 358-A:10.	Yes. RSA § 358-A:10.	No. <i>See generally</i> RSA § 358-A:10.
<b>New Jersey (N.J. Stat. § 56:8-1, et seq.)</b>	Yes. <i>See Varacallo v. Mass. Mut. Life Ins. Co.</i> , 332 N.J. Super. 31, 45 (App. Div. 2000).	Yes. <i>Thiedemann v. Mercedes-Benz U.S.A., LLC</i> , 183 N.J. 234 (2005).	No. Intent is an element for concealment, suppression, and omission, but is not an element for other unconscionable practices. N.J. Stat. § 56:8-2; <i>Fenwick v. Kay Am. Jeep, Inc.</i> , 72 N.J. 372, 377 (1977).	No, but plaintiff must show a causal nexus to loss. <i>Int'l Union of Operating Engineers Local #68 Welfare Fund v. Merck &amp; Co., Inc.</i> , 192 N.J. 372, 929 A.2d 1076 (2007).	6 years from time plaintiff knew or should have known of the claim's existence. N.J.S.A. 2A:14-1; <i>Mirra v. Holland America Line</i> , 331 N.J. Super. 86, 91 (App. Div. 2000).	No.	Yes. N.J. Stat. § 56:8-19.	Yes, is mandatory. N.J. Stat. § 56:8-19.	Yes. <i>Wildstein v. Tru Motors, Inc.</i> , 227 N.J. Super. 331 (Law. Div. 1988).	Yes. N.J. Stat. § 56:8-19.	Yes. N.J. Stat. § 56:8-19.	No. <i>See generally</i> N.J. Stat. § 56:8-19.
<b>New Mexico (N.M. Stat. § 57-12-1, et seq.)</b>	Yes. N.M. Stat. § 57-12-10 (E); <i>Fiser v. Dell Computer Corp.</i> , 144 N.M. 464, 468-69 (2008).	No, but injury is required to recover damages. <i>Page &amp; Wirtz Constr. Co. v. Solomon</i> , 794 P.2d 349, 354 (N.M. 1990); N.M. Stat. §§ 57-12-10(A), (B).	Yes, "knowingly." N.M. Stat. §§ 57-12-2(A), (B); <i>Atherton v. Gopin</i> , 340 P.3d 630 (N.M. Ct. App. 2014).	No, but causation required for damages. N.M. Stat. § 57-12-10(B); <i>Lohman v. Daimler-Chrysler Corp.</i> , 142 N.M. 437, 166 P.3d 1091 (Ct. App. 2007).	4 years from date of violation. N.M. Stat. Ann. § 37-1-4; <i>Nance v. L.J. Dolloff Assocs., Inc.</i> , 138 N.M. 851, 856 (2005).	No.	Yes. N.M. Stat. § 57-12-10(B).	Yes, but only for the named plaintiffs. N.M. Stat. § 57-12-10(B), (E).	Yes, but only up to treble damages. Additional punitive damages can be obtained for separate causes of action. <i>McLelland v. United Wis. Life Ins. Co.</i> , 127 N.M. 303 (1999).	Yes. N.M. Stat. § 57-12-10(A).	Yes. N.M. Stat. § 57-12-10(C).	Yes, if the plaintiff's claims were "groundless." N.M. Stat. § 57-12-10(C).

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<b>New York -N.Y. Gen. Bus. § 349</b>	Yes, but the deceptive act had to have occurred in New York. <i>See Drizin v. Sprint Corp.</i> , 12 A.D.3d 245, 785 N.Y.S.2d 428 (App. Div. 2004).	Yes – actual harm. N.Y. Gen. Bus. §§349, 350; <i>Baron v. Pfizer, Inc.</i> , 840 N.Y.S.2d 445, 448 (N.Y. App. Div. 2007).	Courts are split. <i>Compare People v. Wilco Energy Corp.</i> , 284 A.D.2d 469 (N.Y. App. Div. 2001) with <i>Samiento v. World Yacht Inc.</i> , 10 N.Y.3d 70 (N.Y.Ct. App. 2008).	No, but must prove causation. <i>Baron</i> , 840 N.Y.S.2d at 448; <i>Small v. Lorillard Tobacco Co., Inc.</i> , 94 N.Y.2d 43 (1999).	3 years after plaintiff suffered injury. N.Y. C.L.S. C.P.L.R. § 214(2); <i>State v. Daicel Chem. Indus., Ltd.</i> , 840 N.Y.S.2d 8 (2007).	No.	Yes. N.Y. Gen. Bus. §§ 349(h), 350-e(3).	Yes, up to \$1000 if defendant “willfully and knowingly” violated § 349.  Up to \$10,000 if defendant “willfully or knowingly” violated §350.	Not allowed for class actions. <i>See Burns v. Volkswagen of America, Inc.</i> , 460 N.Y.S.2d 410 (1982).	No. <i>See generally</i> N.Y. Gen. Bus. § 349.	Yes. N.Y. Gen. Bus. §§ 349(h), 350-e.	No. <i>See generally</i> N.Y. Gen. Bus. §§ 349, 350.
<b>New York -N.Y. Gen. Bus. § 350</b>				Yes. <i>Bello v. Cablevision Systems Corp.</i> , 185 A.D.2d 262 (N.Y. App. Div. 1992).						Yes. N.Y. Gen. Bus. § 350-e(3).		
<b>North Carolina (N.C. Gen. Stat. § 75-1.1, et seq.)</b>	Yes. <i>Crow v. Citicorp Acceptance Co., Inc.</i> , 319 N.C. 274 (1987).	Yes. N.C. Gen. Stat. § 75-16.	No. <i>Excel Staffing Serv., Inc. v. HP Reidsville, Inc.</i> , 616 S.E.2d 349 (N.C. Ct. App. 2005).	Courts are split. <i>Compare Cullen v. Valley Forge Life Ins. Co.</i> , 161 N.C. App. 570, 580 (Ct. App. 2003) with <i>Business Cabling, Inc. v. Yokeley</i> , 182 N.C. App. 657 (2007).	4 years from date of violation. N.C. Gen. Stat. § 75-16.2.	No.	Yes. N.C. Gen. Stat. § 75-16.	Yes, is mandatory. N.C. Gen. Stat. § 75-16; <i>Pearce v. Am. Defender Life Ins. Co.</i> , 316 N.C. 461, 470 (1986).	No. <i>Pinehurst, Inc. v. O'Leary Bros. Realty, Inc.</i> , 79 N.C. App. 51, 62-63 (Ct. App. 1986).	No, unless for lending violations. N.C. Gen. Stat. § 75-19.	Yes, but only if violation was willful. N.C. Gen. Stat. § 75-16.1.	Yes, if plaintiff knew or should have known the action was frivolous and malicious. N.C. Gen. Stat. § 75-16.1.
<b>North Dakota (N.D. Cent. Code §§ 51-15-01 through 51-15-11)</b>	Yes. <i>Rose v. United Equitable Ins. Co.</i> , 651 N.W.2d 683 (N.D. 2002).	Yes. <i>Ackre v. Chapman &amp; Chapman, PC</i> , 788 N.W.2d 344 (N.D. 2010).	Yes. N.D. Cent. Code § 51-15-02.	No. N.D. Cent. Code § 51-15-02.	6 years from time plaintiff knew or should have known of claim's existence. N.D. Cent. Code § 28-01-16.	No.	Yes. N.D. Cent. Code § 51-15-09.	Yes, but only for “knowing” violations. N.D. Cent. Code § 51-15-09.	Yes. <i>DJ Coleman, Inc. v. Nufarm Americas, Inc.</i> , 693 F. Supp. 2d 1055 (D. N.D. 2010).	No. Only the Attorney General may seek it. <i>See</i> N.D. Cent. Code §§ 51-15-07.	Yes. N.D. Cent. Code § 51-15-09.	Yes, is required that defendants be awarded attorney's fees for frivolous claims. N.D. Cent. Code § 28-26-01.

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<b>Ohio (ORC § 1345, et seq.)</b>	Yes, but only if a prior decision or rule put defendant on notice that the specific conduct at issue was deceptive or unconscionable prior to the subject transaction. ORC §1345.09(B); <i>Bower v. Int'l Bus. Machines, Inc.</i> , 495 F. Supp. 2d 837 (S.D. Ohio 2007).	Yes, for each class member. <i>Felix v. Ganley Chevrolet, Inc.</i> , 145 Ohio St. 3d 329 (2015).	No. <i>Rose v. Zaring Homes, Inc.</i> , 702 N.E.2d 952 (Ohio Ct. App. 1997).	No. <i>Rose</i> , 702 N.E.2d at 956.	2 years after violation or 1 year after termination of proceedings by the Attorney General. O.R.C. § 1345.10(C).	No.	Yes. ORC §§ 1345.09(A), (B).	Not for class actions. ORC § 1345.09(B).	No. <i>Borrer v. MarineMax of Ohio</i> , 2007 WL 431737 (Ohio Ct. App. Feb. 9, 2007).	Yes. ORC § 1345.09(D).	Yes, but only if defendant knowingly committed a violation. ORC § 1345.09(F).	Yes, if plaintiff brought or maintained an action that was groundless or made in bad faith. ORC § 1345.09(F).
<b>Oklahoma (15 Okla. Stat. § 751, et seq.)</b>	Yes. <i>Tibbetts v. Sight 'n Sound Appliance Centers, Inc.</i> , 2003 OK 72, 77 P.3d 1042; <i>Walls v. Am. Tobacco Co.</i> , 2000 OK 66, 11 P.3d 626.	Yes. 15 Okla. Stat. §761.1(A); <i>Walls</i> , 2000 OK at ¶ 11, 11 P.3d at 629.	Most of the prohibited practices have an intent element. 15 Okla. Stat. § 753.	Causation required <i>Patterson v. Beall</i> , 2000 OK 92, 19 P.3d 839, 846-47.	3 years after date of plaintiff's injury. <i>Brashears v. Sight "N Sound Appliance Centers, Inc.</i> , 981 P.2d 1270 (Ok. Ct. Civ. App. 1999).	No.	Yes. 15 Okla. St. § 761.1(A).	No. <i>See</i> 15 Okla. St. § 761.1(A), (B).	Yes, but not for class actions and only for unconscionable violations. 15 Okla. Stat. § 761.1(B).	No. <i>See generally</i> 15 Okla. Stat. §761.1.	Yes, up to \$10,000. 15 Okla. Stat. § 761.1(A).	
<b>Oregon (ORS §646.605, et seq.)</b>	Yes. ORS §646.638(8).	Yes. <i>Feitler v. Animation Celebration, Inc.</i> , 170 Or.App. 702 (2000).	Yes. Class members can only recover damages if defendant was "reckless" or "knowing." ORS §646.638(8).	Causation required. <i>Pearson v. Philip Morris, Inc.</i> , 358 Or. 88 (2015).	1 year from discovery of violation. ORS §646.638(6); <i>Pearson v. Philip Morris, Inc.</i> , 358 Or. 88 (2015).	No.	Yes. ORS §646.638(1).	No. <i>See generally</i> ORS §646.638.	Yes. ORS §646.638(8).	Yes. ORS §646.638(8).	Yes. ORS §646.638(3).	Yes, if plaintiff had no objectively reasonable basis to bring the action. ORS §646.638(3).
<b>Pennsylvania (73 Pa. Stat. § 201-1, et seq.)</b>	Yes. <i>Toy v. Metropolitan Life Ins. Co.</i> , 928 A.2d 186, 201-03 (Pa. 2007); <i>Weinberg v. Sun Co., Inc.</i> , 777 A.2d 442, 444 (Pa. 2001).	Yes. 73 P.S. § 201-9.2(a); <i>Weinberg</i> , 777 A.2d at 446.	No. <i>Bennett v. A.T. Masterpiece Homes at Broadsprings, LLC</i> , 40 A.3d 145 (Pa. Super. 2012).	Yes. <i>Toy v. Metropolitan Life Ins. Co.</i> , 928 A.2d 186, 201-03 (Pa. 2007).	6 years from date plaintiff had sufficient facts to be on notice of the wrong. <i>Lesoon v. Metropolitan Life Ins. Co.</i> , 898 A.2d 620, 627 (Pa. Super. 2006).	No.	Yes. 73 P.S. § 201-9.2.	Yes. 73 P.S. § 201-9.2.	No. <i>McCauslin v. Reliance Fin. Co.</i> , 751 A.2d 683, 685 (Pa. Super. 2000); <i>Samuel-Bassett v. KIA Motors Am., Inc.</i> , 357 F.3d 392, 401 (3d Cir. 2004).	Yes. 73 P.S. § 201-9.2.	Yes. 73 P.S. § 201-9.2.	No. <i>See generally</i> 73 P.S. § 201-9.2.



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<b>Rhode Island (R.I. Gen. Laws §6-13.1-1, et seq.)</b>	Yes, but limited to plaintiffs who purchased the product for personal or household purposes. Gen. Laws §6-13.1-5.2(a)-(b).	Yes. Gen. Laws §6-13.1-5.2(a).	No. <i>Long v. Dell, Inc.</i> , 93 A.3d 988 (R.I. 2014).	Causation required. Gen. Laws §6-13.1-5.2(a).	Adopts the statute of limitations for the most analogous cause of action to the unfair/deceptive act. <i>Kennedy v. Acura</i> , 2002 WL 31331373 (R.I. Sup. Aug. 28, 2002).	No.	Yes. Gen. Laws §6-13.1-5.2(a)-(b).	No, but punitive damages are allowed. <i>See generally</i> Gen. Laws §6-13.1-5.2.	Yes. Gen. Laws §6-13.1-5.2(b).	Yes. Gen. Laws §6-13.1-5.2(b).	Yes. Gen. Laws §6-13.1-5.2(d).	Yes. Gen. Laws §6-13.1-5.2(d).
<b>South Carolina (S.C. Code Code §§ 39-5-10 to 39-5-560)</b>	No. S.C. Code §§ 39-5-140(a); <i>Dema v. Tenet Phys. Services-Hilton Head, Inc.</i> , 383 S.C. 115 (2009).	Yes, and must also show injury to the public interest. S.C. Code § 39-5-140(a); <i>Omni Outdoor Adver., Inc. v. Columbia Outdoor Adver., Inc.</i> , 974 F.2d 502, 507 (4th Cir. 1992).	No. <i>Inman v. Ken Hyatt Chrysler Plymouth, Inc.</i> , 363 S.E.2d 691, 692 (S.C. 1988).	No. S.C. Code § 39-5-140(a); <i>Inman</i> , 363 S.E.2d at 692.	3 years from date violation was or reasonably could have been discovered. S.C. Code § 39-5-150.	No.	Yes. S.C. Code § 39-5-140(a).	Yes, if was “willful or knowing” violation. S.C. Code § 39-5-140(a)	No. <i>Tousley v. N. Am. Van Lines, Inc.</i> , 752 F.2d 96 (4th Cir. 1985).	No. <i>See generally</i> S.C. Code §§ 39-5-10 to 39-5-560.	Yes. S.C. Code § 39-5-140(a).	No. <i>See</i> S.C. Code § 39-5-140(a).
<b>South Dakota (S.D. Codified Laws §37-24-21, et seq.)</b>	Unclear.	Yes, if the plaintiff wants to pursue damages. S.D. Codified Laws § 37-24-31.	No. Only some of the deceptive practices listed have an intent element. S.D. Codified Laws § 37-24-6.	Yes. <i>Nygaard v. Sioux Valley Hospitals &amp; Health System</i> , 731 N.W.2d 184 (S.D. 2007).	4 years after discovery of conduct. S.D. Codified Laws § 37-24-33.	No.	Yes. S.D. Codified Laws § 37-24-31.	No. <i>See generally</i> S.D. Codified Laws § 37-24-31.	No. <i>See generally</i> S.D. Codified Laws § 37-24-31.	No. Equitable relief can only be sought by the state Attorney General. <i>See</i> S.D. Codified Laws § 37-24-23	No. <i>See generally</i> S.D. Codified Laws § 37-24-31.	No. <i>See generally</i> S.D. Codified Laws § 37-24-31.
<b>Tennessee (Tenn. Code Ann. §47-18-101, et seq.)</b>	No. Tenn. Code Ann. § 47-18-109; <i>Walker v. Sunrise Pontiac-GMC Truck, Inc.</i> , 249 S.W.3d 301 (Tenn. 2008).	Yes. Tenn. Code Ann. § 47-18-109(a)(1).	No. <i>Fayne v. Vincent</i> , 301 S.W.3d 162 (Tenn. 2009).	Unclear, but reliance required for fraud and misrepresentation claims. <i>Hardcastle v. Harris</i> , 170 S.W.3d 67 (Tenn. Ct. App. 2004).	5 years after date of transaction. Tenn. Code Ann. § 47-18-110.	No.	Yes. Tenn. Code Ann. § 47-18-109(a)(1).	Yes, if “willful or knowing” violation. Tenn. Code Ann. § 47-18-109(a)(3).	Yes. Tenn. Code Ann. § 47-18-109(a)(3).	Yes. Tenn. Code Ann. § 47-18-109(b).	Yes. Tenn. Code Ann. § 47-18-109(e)(1)	Yes, if action was frivolous, without merit, or meant to harass. Tenn. Code Ann. § 47-18-109(3)(2).
<b>Texas (Tex. Bus. &amp; Com. Code Ann. §17.41, et seq.)</b>	Yes. Tex. Bus. & Comm. Code Ann. §17.501.	Yes, includes mental anguish. Tex. Bus. & Comm. Code §17.50(a).	No. Only some of the deceptive practices listed have an intent element. Tex. Bus. & Comm. Code §17.46.	Yes. Tex. Bus. & Comm. Code §17.50(a)(1)(B).	2 years from discovery of the violation. Tex. Bus. & Comm. Code §17.565.	Yes. Tex. Bus. & Comm. Code §17.505	Yes. Tex. Bus. & Comm. Code §17.50(b)(1).	Yes, if knowing or intentional violation. Tex. Bus. & Comm. Code §17.50(b)(1).	No, cannot exceed treble damages. Tex. Bus. & Comm. Code §17.50(h).	Yes. Tex. Bus. & Comm. Code §17.50(b)(2)-(3).	Yes. Tex. Bus. & Comm. Code §17.50(d).	Yes, if groundless, bad faith, or meant to harass. Tex. Bus. & Comm. Code §17.50(c).

## Consumer Protection Statutes

	Class actions permitted?	Injury required?	Scienter require?	Reliance required?	Statute of limitations	Pre-suit notice required?	Remedies: Actual damages?	Remedies: Treble damages?	Remedies: Punitive damages ?	Remedies: Equitable relief?	Attorney's fees for prevailing P?	Attorney's fees for prevailing D?
<b>Utah (Utah Code § 13-11-1 to 13-11-23)</b>	Limited. Class damages only permissible if violation occurred after authority adopted a rule prohibiting the act, the act was declared to violate a final judgment, or act was prohibited by a finalized consent judgment. Utah Code § 13-11-19(4)(a). Otherwise, class is limited to just equitable relief. Utah Code § 13-11-19(3).	Yes. Utah Code § 13-11-19(2), (4).	Yes. <i>Kee v. R-G Crown Bank</i> , 656 F. Supp. 2d 1348, 1356 (D. Utah 2009).	Causation required. Utah Code § 13-11-19(2), (4).	2 years after violation or 1 year after termination of proceedings by the enforcing authority. Utah Code § 13-11-19(8).	No.	Yes. Utah Code § 13-11-19(2), (4).	No. <i>See generally</i> Utah Code § 13-11-19.	No. <i>See</i> Utah Code § 13-11-19(4)(a).	Yes. Utah Code § 13-11-19(1), (3).	Yes, but only if defendant's act violated the UCSPA. Utah Code § 13-11-19(5).	Yes, if plaintiff brought or maintained an action s/he knew to be groundless. Utah Code § 13-11-19(5).
<b>Vermont (9 V.S.A. §§ 2451 to 2480n)</b>	Yes. <i>Elkins v. Microsoft Corp.</i> , 174 Vt. 328, 331 (2002); <i>Salatino v. Chase</i> , 182 Vt. 267 (2007).	No injury required if reliance is shown. <i>Peabody v. P.J.'s Auto Village, Inc.</i> , 153 Vt. 55 (1989); 9 V.S.A. § 2461(b).	No. <i>Inkel v. Pride Chevrolet-Pontiac</i> , 945 A.2d 855, 859 (Vt. 2008); <i>Winton v. Johnson &amp; Dix Fuel Corp.</i> , 147 Vt. 236, 243 (Vt. 1986).	No reliance required if injury is shown. 9 V.S.A. § 2461(b); <i>Jordan v. Nissan N. Am.</i> , 853 A.2d 40, 44 (Vt. 2004).	6 years. 12 V.S.A. § 511.	No.	Yes. 9 V.S.A. § 2461(b).	Yes. 9 V.S.A. § 2461(b).	Yes, only if defendant acted with malice. <i>Bruntaeger v. Zeller</i> , 147 Vt. 247, 253-54 (1986).	Yes. 9 V.S.A. § 2461(b).	Yes. 9 V.S.A. § 2461(b).	Yes. 9 V.S.A. § 2461(b).
<b>Virginia (Va. Code § 59.1-196, et seq.)</b>	No, Virginia law has no provision for class actions in its state law. Va. Code § 59.1-204.	Yes. Va. Code § 59.1-204(A); <i>Polk v. Crown Auto, Inc.</i> , 228 F.3d 541 (5th Cir. 2000); <i>Alston v. Crown Auto, Inc.</i> , 224 F.3d 332 (4th Cir. 2000).	Yes. <i>Weiss v. Cassidy Dev. Corp.</i> , 63 Va. Cir. 76 (2003).	Yes. <i>Weiss v. Cassidy Dev. Corp.</i> , 63 Va. Cir. 76 (2003).	2 years from date of plaintiff's injury. Va. Code § 59.1-204.1; <i>Schmidt v. Household Fin. Corp.</i> , 276 Va. 108 (2008).	No.	Yes. Va. Code § 59.1-204(A).	Yes. Va. Code § 59.1-204(A).	No. <i>See generally</i> § 59.1-204.	No. Va. Code § 59.1-201; <i>Physicians Comm. For Responsible Med. v. General Mills, Inc.</i> , 283 Fed. Appx. 139 (4th Cir. 2008).	Yes, unless defendant made a written offer to cure that was rejected. Va. Code §§ 59.1-198, 59.1-204(B), (C).	No. <i>See generally</i> Va. Code § 59.1-204.

## Consumer Protection Statutes

	Class actions permitted?	Injury required?	Scienter require?	Reliance required?	Statute of limitations	Pre-suit notice required?	Remedies: Actual damages?	Remedies: Treble damages?	Remedies: Punitive damages ?	Remedies: Equitable relief?	Attorney's fees for prevailing P?	Attorney's fees for prevailing D?
<b>Washington (RCW § 19.86.010, et seq.)</b>	Yes. <i>See, e.g., Trimble v. Holmes Harbor Sewer Dist.</i> , 2003 WL 23100273 (Super. Ct. Oct. 6, 2003).	Yes, but plaintiff must also show injury to public interest. RCW § 19.86.090; <i>Stephens v. Omni Ins. Co.</i> , 138 Wash.App. 151 (2007).	No. <i>Hangman Ridge Training Stables v. Safeco Title Ins. Co.</i> , 719 P.2d 531, 535 (Wash. 1986).	Causation required <i>Hangman Ridge</i> , 719 P.2d at 539.	4 years from accrual of cause of action. RCW § 19.86.120.	No.	Yes. RCW § 19.86.090.	Yes. RCW § 19.86.090.	No. <i>See generally</i> RCW § 19.86.090.	Yes. RCW § 19.86.090.	Yes. RCW § 19.86.090; <i>Mason v. Mortgage America, Inc.</i> , 792 P.2d 842 (Wash. 1990).	No. <i>See generally</i> RCW § 19.86.090.
<b>West Virginia (W. Va. Code § 46A-1-101, et seq.)</b>	Yes. <i>See, e.g., In re Trimble Virginia Rezulin Litigation</i> , 214 W.Va. 52 (2003).	Yes. W. Va. Code § 46A-6-106(a).	No, but most of the listed deceptive acts have an intent element W. Va. Code § 46A-6-102(7)(M).	Yes. <i>White v. Wyeth</i> , No. 35296, 2010 WL 5140048 (W. Va. Dec. 17, 2010).	4 years from date of violation. W. Va. Code § 46A-5-101(1); <i>Silvious v. Coca Cola Co.</i> , 2012 WL 1565288 (N.D. W. Va. May 2, 2012).	Yes. Consumer must inform seller in writing via certified mail of alleged violation and allow seller 20 days from receipt of notice to make cure offer. W. Va. Code § 46A-6-106(b).	Yes. W. Va. Code § 46A-6-106(a).	No. <i>See generally</i> W. Va. Code § 46A-6-106.	No. <i>Viriden v. Altria Group, Inc.</i> , 304 F.Supp.2d 832 (N.D. W. Va. 2004).	Yes. W. Va. Code § 46A-6-106(a).	No. <i>See generally</i> W. Va. Code § 46A-6-106.	Yes, if the defendant had already accepted and performed on the cure offer prior to the action. W. Va. Code § 46A-6-106(h).
<b>Wisconsin - DTPA (Wis. Stat. § 100.18, et seq.)</b>	Yes. <i>See, e.g., Tietsworth v. Harley-Davidson, Inc.</i> , 677 N.W.2d 233 (Wis. 2004).	Yes. Wis. Stat. § 100.18(11)(b)(2).	Yes, must have intended to make the representation. <i>Tietsworth</i> , 677 N.W.2d at 239.	No, but causation is required.. <i>K&amp;S Tool &amp; Die Corp. v. Perfection Mach. Sales, Inc.</i> , 732 N.W.2d 792, 798 (Wis. 2007).	3 years after violation. Wis. Stat. § 100.18 (11)(b)(3).	No.	Yes. Wis. Stat. § 100.18(11)(b)(2).	No. <i>See generally</i> Wis. Stat. § 100.18.	Double damages available for violation of prior injunction. Wis. Stat. § 100.18(11)(b)(2).	No. Only the Dept. of Agriculture, Trade and Consumer Protection can seek injunctive relief. Wis. Stat. § 100.18(11).	Yes. Wis. Stat. § 100.18 (11)(b)(2).	No. <i>See generally</i> Wis. Stat. § 100.18.
<b>Wyoming (W.S. §§ 40-12-101 through 114)</b>	Yes. W.S. § 40-12-108(b).	Yes. W.S. § 40-12-108(a).	Yes, requires “knowing” violation. W.S. § 40-12-105(a).	Yes. W.S. § 40-12-108(a).	Within earlier of 1 year from discovery of violation or 2 years from consumer transaction AND within 1 year of providing notice to violator. W.S. § 40-12-109.	Yes. Consumer must give written notice within 1 year of initial discovery of the unlawful practice, or within 2 years after the transaction. W.S. § 40-12-109.	Yes. W.S. § 40-12-108(b).	No. <i>See</i> W.S. §§ 40-12-108, 114.	No. <i>See</i> W.S. §§ 40-12-108, 114.	No. <i>See</i> W.S. §§ 40-12-108, 114.	Only for prevailing plaintiffs. W.S. § 40-12-108(b).	

# **EXHIBIT 26**



Data Sheet

# Barracuda®

The Power of One

## Key Advantages

- Double your capacity and drive down costs with the industry's first 1TB-per-disk hard drive technology.
- Up to 3TB capacity with 7200-RPM performance. Why compromise?
- SATA 6Gb/s interface optimizes burst performance
- Seagate AcuTrac™ servo technology delivers dependable performance, even with hard drive track widths of only 75 nanometers.
- Seagate OptiCache™ technology boosts overall performance by as much as 45% over the previous generation.
- Seagate SmartAlign™ technology provides a simple, transparent migration to Advanced Format 4K sectors.
- Free Seagate DiscWizard™ software allows you to install a 3TB hard drive in Windows, including XP, without UEFI BIOS.

## Best-Fit Applications

- Desktop or all-in-one PCs
- Home servers
- PC-based gaming systems
- Desktop RAID
- Direct-attached external storage devices (DAS)
- Network-attached storage devices (NAS)





Specifications	3TB <sup>1</sup>	2TB <sup>1</sup>	1.5TB <sup>1</sup>	1TB <sup>1</sup>	750GB <sup>1</sup>	500GB <sup>1</sup>	320GB <sup>1</sup>	250GB <sup>1</sup>
Model Number	ST3000DM001	ST2000DM001	ST1500DM003	ST1000DM003	ST750DM003	ST500DM002 <sup>2</sup>	ST320DM000 <sup>2</sup>	ST250DM000 <sup>2</sup>
Interface Options	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ
<b>Performance</b>								
Spindle Speed (RPM)	7200	7200	7200	7200	7200	7200	7200	7200
Cache, Multisegmented (MB)	64	64	64	64	64	16	16	16
SATA Transfer Rates Supported (Gb/s)	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5
Seek Average, Read (ms)	<8.5	<8.5	<8.5	<8.5	<8.5	<11	<11	<11
Seek Average, Write (ms)	<9.5	<9.5	<9.5	<9.5	<9.5	<12	<12	<12
Average Data Rate, Read/Write (MB/s)	156	156	156	156	156	125	125	125
Max Sustained Data Rate, OD Read (MB/s)	210	210	210	210	210	144	144	144
<b>Configuration/Organization</b>								
Heads/Disks	6/3	6/3	4/2	2/1	2/1	2/1	2/1	1/1
Bytes per Sector	4096	4096	4096	4096	4096	4096 or 512 <sup>2</sup>	4096 or 512 <sup>2</sup>	4096 or 512 <sup>2</sup>
<b>Voltage</b>								
Voltage Tolerance, Including Noise (5V)	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%
Voltage Tolerance, Including Noise (12V)	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%
<b>Reliability/Data Integrity</b>								
Contact Start/Stop Cycles	—	—	—	—	—	50,000	50,000	50,000
Load/Unload Cycles	300,000	300,000	300,000	300,000	300,000	—	—	—
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14
Annualized Failure Rate (AFR)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
Power-On Hours	2400	2400	2400	2400	2400	2400	2400	2400
<b>Power Management</b>								
Startup Power (A)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Operating Mode, Typical (W)	8.0	8.0	6.70	5.90	5.90	6.19	6.19	6.19
Idle2 Average (W)	5.40	5.40	4.50	3.36	3.36	—	—	—
Idle Average (W)	—	—	—	—	—	4.60	4.60	4.60
Standby Mode (W)	0.75	0.75	0.75	0.63	0.63	0.79	0.79	0.79
Sleep Mode (W)	0.75	0.75	0.75	0.63	0.63	0.79	0.79	0.79
<b>Environmental</b>								
Temperature								
Operating (ambient min °C)	0	0	0	0	0	0	0	0
Operating (drive case max °C)	60	60	60	60	60	60	60	60
Nonoperating (ambient °C)	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
<b>Physical</b>								
Height (mm/in)	26.11/1.028	26.11/1.028	26.11/1.028	20.17/0.7825	20.17/0.7825	19.98/0.787	19.98/0.787	19.98/0.787
Width (mm/in)	101.6/4.0	101.6/4.0	101.6/4.0	101.6/4.0	101.6/4.0	101.6/4.0	101.6/4.0	101.6/4.0
Depth (mm/in)	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787
Weight (g/lb)	626/1.38	626/1.38	535/1.18	400/0.88	400/0.88	415/0.92	415/0.92	415/0.92
Carton Unit Quantity	20	20	20	25	25	25	25	25
Cartons per Layer	40	40	40	40	40	40	40	40
Cartons per Pallet	8	8	8	8	8	8	8	8
<b>Special Features</b>								
Seagate OptiCache™ Technology	Yes	Yes	Yes	Yes	Yes	No	No	No
Seagate AcuTrac™ Technology	Yes	Yes	Yes	Yes	Yes	No	No	No
Seagate SmartAlign™ Technology	Yes	Yes	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>

1 One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.

2 Seagate ships this drive in both 4K- and 512-byte sectors. SmartAlign technology is included on 4K sector drives. Both drives are functionally and physically equivalent.

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# **EXHIBIT 27**



Data Sheet

# Barracuda®

The Power of One

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- Double your capacity and drive down costs with the industry's first 1TB-per-disk hard drive technology.
- Up to 3TB capacity with 7200-RPM performance. Why compromise?
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- Seagate OptiCache™ technology boosts overall performance by as much as 45% over the previous generation.
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- Free Seagate DiscWizard™ software allows you to install a 3TB hard drive in Windows, including XP, without UEFI BIOS.

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- Home servers
- PC-based gaming systems
- Desktop RAID
- Direct-attached external storage devices (DAS)
- Network-attached storage devices (NAS)







Specifications	3TB <sup>1</sup>	2TB <sup>1</sup>	1.5TB <sup>1</sup>	1TB <sup>1</sup>	750GB <sup>1</sup>	500GB <sup>1</sup>	320GB <sup>1</sup>	250GB <sup>1</sup>
Model Number	ST3000DM001	ST2000DM001	ST1500DM003	ST1000DM003	ST750DM003	ST500DM002 <sup>2</sup>	ST320DM000 <sup>2</sup>	ST250DM000 <sup>2</sup>
Interface Options	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ
<b>Performance</b>								
Spindle Speed (RPM)	7200	7200	7200	7200	7200	7200	7200	7200
Cache, Multisegmented (MB)	64	64	64	64	64	16	16	16
SATA Transfer Rates Supported (Gb/s)	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5
Seek Average, Read (ms)	<8.5	<8.5	<8.5	<8.5	<8.5	<11	<11	<11
Seek Average, Write (ms)	<9.5	<9.5	<9.5	<9.5	<9.5	<12	<12	<12
Average Data Rate, Read/Write (MB/s)	156	156	156	156	156	125	125	125
Max Sustained Data Rate, OD Read (MB/s)	210	210	210	210	210	144	144	144
<b>Configuration/Organization</b>								
Heads/Disks	6/3	6/3	4/2	2/1	2/1	2/1	2/1	1/1
Bytes per Sector	4096	4096	4096	4096	4096	4096 or 512 <sup>2</sup>	4096 or 512 <sup>2</sup>	4096 or 512 <sup>2</sup>
<b>Voltage</b>								
Voltage Tolerance, Including Noise (5V)	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%	+10%/-5.0%
Voltage Tolerance, Including Noise (12V)	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%
<b>Reliability/Data Integrity</b>								
Contact Start/Stop Cycles	—	—	—	—	—	50,000	50,000	50,000
Load/Unload Cycles	300,000	300,000	300,000	300,000	300,000	—	—	—
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14
Annualized Failure Rate (AFR)	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
Power-On Hours	2400	2400	2400	2400	2400	2400	2400	2400
<b>Power Management</b>								
Startup Power (A)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Operating Mode, Typical (W)	8.0	8.0	6.70	5.90	5.90	6.19	6.19	6.19
Idle2 Average (W)	5.40	5.40	4.50	3.36	3.36	—	—	—
Idle Average (W)	—	—	—	—	—	4.60	4.60	4.60
Standby Mode (W)	0.75	0.75	0.75	0.63	0.63	0.79	0.79	0.79
Sleep Mode (W)	0.75	0.75	0.75	0.63	0.63	0.79	0.79	0.79
<b>Environmental</b>								
Temperature								
Operating (ambient min °C)	0	0	0	0	0	0	0	0
Operating (drive case max °C)	60	60	60	60	60	60	60	60
Nonoperating (ambient °C)	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
<b>Physical</b>								
Height (mm/in)	26.11/1.028	26.11/1.028	26.11/1.028	20.17/0.7825	20.17/0.7825	19.98/0.787	19.98/0.787	19.98/0.787
Width (mm/in)	101.6/4.0	101.6/4.0	101.6/4.0	101.6/4.0	101.6/4.0	101.6/4.0	101.6/4.0	101.6/4.0
Depth (mm/in)	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787	146.99/5.787
Weight (g/lb)	626/1.38	626/1.38	535/1.18	400/0.88	400/0.88	415/0.92	415/0.92	415/0.92
Carton Unit Quantity	20	20	20	25	25	25	25	25
Cartons per Layer	40	40	40	40	40	40	40	40
Cartons per Pallet	8	8	8	8	8	8	8	8
<b>Special Features</b>								
Seagate OptiCache™ Technology	Yes	Yes	Yes	Yes	Yes	No	No	No
Seagate AcuTrac™ Technology	Yes	Yes	Yes	Yes	Yes	No	No	No
Seagate SmartAlign™ Technology	Yes	Yes	Yes	Yes	Yes	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>

1 One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.

2 Seagate ships this drive in both 4K- and 512-byte sectors. SmartAlign technology is included on 4K sector drives. Both drives are functionally and physically equivalent.

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# **EXHIBIT 28**

1 UNITED STATES DISTRICT COURT  
2 NORTHERN DISTRICT OF CALIFORNIA  
3 SAN JOSE DIVISION  
4

5 IN RE SEAGATE TECHNOLOGY LLC  
6 LITIGATION,  
7 \_\_\_\_\_

8 CASE NO. 5:16-CV-00523-JCS  
9 \_\_\_\_\_

10 CONSOLIDATED ACTION,  
11 \_\_\_\_\_  
12

13 VIDEOTAPED DEPOSITION OF DAVID SCHECHNER

14 San Francisco, California

15 Tuesday, June 6, 2017  
16  
17  
18  
19  
20  
21  
22

23 Reported by: Ashley Soevyn, CSR No. 12019

24 Job No. 2240

25 Pages 1 - 154

1 A Exhibit 4.

2 Q RFP numbers three and four are request  
3 for production numbers three and four.

4 Are you currently in possession of any of  
5 the hard drives referred to in the complaint?

6 A I am currently in possession of the hard  
7 drive that was sent to me in December 2014. I don't  
8 know the serial number of that drive and whether  
9 it's referred to in this complaint or not.

10 Q In response to request number five, have  
11 you searched for all documents, including but not  
12 limited to advertising, upon which you relied in  
13 connection with your purchases of any of the drives  
14 referred to in the complaint?

15 A I have.

16 Q Was there any advertising that you relied  
17 on?

18 A There was no advertising that I had  
19 saved.

20 Q Do you remember what you relied on in  
21 making the decision to purchase the Backup Plus  
22 drive?

23 A Initially?

24 Q Yes.

25 A Sure. I relied on the advertised

1 specifications for the drive, the size, the price,  
2 the annualized failure rate; anything that would  
3 have been shown on Amazon. I relied on other  
4 customer reviews.

5 Q Do you remember looking at any other  
6 websites other than Amazon?

7 A I do. That was listed in here. I looked  
8 at Tiger Direct and at Newegg, I believe, was the  
9 third one that I had listed.

10 Q Do you remember going to the Seagate  
11 website?

12 A I looked up the data sheet for the  
13 Barracuda drives, yes.

14 Q What do you recall reading on the data  
15 sheet?

16 A The annualized failure rate was listed  
17 less than 1 percent power on hours of 2,400.

18 Q Did you save anything you saw on the  
19 Seagate websites?

20 A Not at the time, no. I didn't. I have a  
21 copy of the data sheet now but I had not saved it at  
22 the time.

23 Q Is there any other document that you  
24 relied on, or website that you relied on, in making  
25 the decision to purchase the Backup Plus hard drive?

1 sit there and be accessed when the backup program  
2 ran.

3 Q At the time that you purchased the  
4 external hard drive, the Backup Plus, did you know  
5 the model number of the internal drive?

6 A Not at the time.

7 Q Where did you find the data about AFR and  
8 power-on hours?

9 A On Seagate's website.

10 Q Seagate's website for the Backup Plus?

11 A Seagate's website for Barracuda drives,  
12 yeah.

13 Q Did you know it was a Barracuda drive  
14 that was inside the Backup Plus?

15 A I did.

16 Q And where did you get that information?

17 A I couldn't even tell you. Somewhere  
18 online. It might have been Tom's Hardware. I don't  
19 recall.

20 Q I think we partially covered this before.  
21 Have you searched for all of your communications  
22 with Seagate?

23 A Yeah. Yes.

24 Q Is it possible that you did not search  
25 your sent mail folder on your Gmail account?

1 I, the undersigned, a Certified Shorthand  
2 Reporter of the State of California, do hereby  
3 certify:

4 That the foregoing proceedings were taken  
5 before me at the time and place herein set forth;  
6 that any witnesses in the foregoing proceedings,  
7 prior to testifying, were duly sworn; that a record  
8 of the proceedings was made by me using machine  
9 shorthand, which was thereafter transcribed under my  
10 direction; further, that the foregoing is a true  
11 record of the testimony given.

12 I further certify I am neither financially  
13 interested in the action nor a relative or employee  
14 of any attorney or party to this action.

15 IN WITNESS WHEREOF, I have this date  
16 subscribed my name.

17  
18 Dated: \_\_\_\_\_

19  
20  
21  
22 \_\_\_\_\_  
23 ASHLEY SOEVYN  
24 CSR No. 12019  
25

# **EXHIBIT 29**



1 UNITED STATES DISTRICT COURT  
2 NORTHERN DISTRICT OF CALIFORNIA  
3 SAN JOSE DIVISION  
4

5 IN RE SEAGATE TECHNOLOGY LLC  
6 LITIGATION,  
7 \_\_\_\_\_

8 CASE NO. 5:16-CV-00523-RMW

9 \_\_\_\_\_  
10 CONSOLIDATED ACTION,  
11 \_\_\_\_\_  
12

13 VIDEOTAPED DEPOSITION OF CHRISTOPHER NELSON

14 San Francisco, California

15 Friday, June 2, 2017  
16  
17  
18  
19  
20  
21  
22

23 Reported by: Ashley Soevyn, CSR No. 12019

24 Job No. 2257

25 Pages 1 - 171

1 close quote. Did you read that statement prior to  
2 making your purchase?

3 A Yes.

4 Q Did you rely on that statement?

5 A I did.

6 Q Were there any other statements from  
7 Seagate that you relied on in making your decision  
8 to purchase the Backup Plus Three-terabyte hard  
9 drive?

10 MR. SIEGEL: Objection as to form.

11 THE WITNESS: Can you be more specific.

12 BY MR. POPOVIC:

13 Q Is there anything else you saw on  
14 Seagate's website that influenced your decision to  
15 purchase the Three-terabyte Backup Plus hard drive?

16 MR. SIEGEL: Same objection. Sorry.  
17 Same objection.

18 THE WITNESS: I believe I had reviewed  
19 some technical documents.

20 BY MR. POPOVIC:

21 Q What technical documents?

22 A I believe it's referenced in 73.

23 Q Paragraph 73 of the Second Consolidated  
24 Amended Complaint says, "This information appeared  
25 in the Barracuda data sheet and the Storage

1 Solutions Guide, among other places. See Exhibit

2 B." Is that what you're referring to?

3 A Yes.

4 Q The Barracuda is a different product from  
5 the product you purchased; is that correct?

6 A The Barracuda is a different  
7 nomenclature, but it's the same drive.

8 Q So did you look at materials about the  
9 Barracuda product in connection with your purchase  
10 of a Backup Plus?

11 A I believe what I referred to was the  
12 three-terabyte -- the three-terabyte hard drive  
13 information, because it's the same drive externally  
14 as it is internally, I believe. Or at least that's  
15 what I was led to believe.

16 Q Is there any other specific information  
17 from Seagate that you can recall, as you're sitting  
18 here right now, that you relied on in making your  
19 decision to purchase a Backup Plus Three-terabyte  
20 hard drive?

21 MR. SIEGEL: Same objection.

22 THE WITNESS: I can't specifically recall  
23 at this time.

24 BY MR. POPOVIC:

25 Q At the time you purchased your Seagate

1 Three-terabyte Backup Plus hard drive, did you  
2 believe that it was, quote, "one of the most stable  
3 and reliable 3TB external hard drives on the  
4 market," close quote?

5 A Based on what I read, yes.

6 Q Based on which things that you had read?

7 A The information that I had read on the  
8 Seagate website.

9 Q Is that the items that were quoted in  
10 Paragraph 67?

11 A Yes.

12 Q And anything else?

13 A I can't recall. I think so.

14 Q What else do you think you relied on? Or  
15 let me rephrase that.

16 What else do you think caused you to  
17 believe that the drive was one of the most stable  
18 and reliable 3TB external hard drives on the market?

19 A In addition to the documents on Seagate's  
20 website and the information, the marketing  
21 information, and the information outside of the --  
22 on the outside of the box, you mean, or?

23 Q Well, is that the universe? Is there  
24 anything in addition to those things?

25 A Not that I can think of.

1 I, the undersigned, a Certified Shorthand  
2 Reporter of the State of California, do hereby  
3 certify:

4 That the foregoing proceedings were taken  
5 before me at the time and place herein set forth;  
6 that any witnesses in the foregoing proceedings,  
7 prior to testifying, were duly sworn; that a record  
8 of the proceedings was made by me using machine  
9 shorthand, which was thereafter transcribed under my  
10 direction; further, that the foregoing is a true  
11 record of the testimony given.

12 I further certify I am neither financially  
13 interested in the action nor a relative or employee  
14 of any attorney or party to this action.

15 IN WITNESS WHEREOF, I have this date  
16 subscribed my name.

17  
18 Dated: \_\_\_\_\_

19  
20  
21  
22 \_\_\_\_\_  
23 ASHLEY SOEVYN  
24 CSR No. 12019  
25

# **EXHIBIT 30**

1 UNITED STATES DISTRICT COURT  
2 NORTHERN DISTRICT OF CALIFORNIA  
3 SAN JOSE DIVISION  
4

5 IN RE SEAGATE TECHNOLOGY LLC  
6 LITIGATION,  
7

8 CASE NO. 5:16-CV-00523-JCS  
9

10 CONSOLIDATED ACTION,  
11  
12

13 VIDEOTAPED DEPOSITION OF JAMES HAGEY

14 San Francisco, California

15 Monday, July 24, 2017  
16  
17  
18  
19  
20  
21  
22

23 Reported by: Ashley Soevyn, CSR No. 12019

24 Job No. 2259

25 Pages 1 - 94

1 drives failed?

2 A I did not.

3 Q So we talked a little bit about  
4 representations regarding AFR and what your  
5 interpretation of what AFR was. I want to do the  
6 same for RAID now.

7 A Okay.

8 Q So can you tell me what a RAID is?

9 A It's a redundant array. It's multiple  
10 disks run together so that if one fails you don't  
11 lose your data; you just replace one disk that has  
12 failed.

13 Q And given your hobbies with videography  
14 and things of that nature, do you use RAID, a RAID  
15 configuration, for things like faster speeds?

16 A I have, but -- I have, but at this time  
17 I'm not.

18 Q So it's mostly for data redundancy that  
19 you're using your RAID?

20 A Correct.

21 Q So I know that you mentioned that you  
22 have a RAID at home now, but you didn't purchase any  
23 three-terabyte Barracuda drives for use in a RAID;  
24 is that correct?

25 A Correct.



1 Q And did you read any of the statements  
2 made by Seagate regarding RAID capabilities, or the  
3 internal Barracuda's RAID capabilities, prior to  
4 purchasing --

5 A Yes.

6 Q Sorry -- prior to purchasing the drive?

7 A Yes.

8 Q Did you rely on any of those statements  
9 considering you weren't going to use the drive on a  
10 RAID configuration?

11 A Yes.

12 Q Why did you rely on them?

13 A Because RAID is typically a more critical  
14 application of a computer setup where you just  
15 cannot afford to lose your data. And my assumption  
16 was that a drive suitable for RAID would be just as  
17 suitable for single-drive storage.

18 Q Gotcha.

19 And just kind of turning to the -- to  
20 another term that's used throughout the complaint.  
21 Have you heard of a NAS before?

22 A Yes.

23 Q Do you know what it?

24 A Yes.

25 Q Can you tell me?

1 I, the undersigned, a Certified Shorthand  
2 Reporter of the State of California, do hereby  
3 certify:

4 That the foregoing proceedings were taken  
5 before me at the time and place herein set forth;  
6 that any witnesses in the foregoing proceedings,  
7 prior to testifying, were duly sworn; that a record  
8 of the proceedings was made by me using machine  
9 shorthand, which was thereafter transcribed under my  
10 direction; further, that the foregoing is a true  
11 record of the testimony given.

12 I further certify I am neither financially  
13 interested in the action nor a relative or employee  
14 of any attorney or party to this action.

15 IN WITNESS WHEREOF, I have this date  
16 subscribed my name.

17  
18 Dated: \_\_\_\_\_

19  
20  
21  
22 \_\_\_\_\_  
23 ASHLEY SOEVYN  
24 CSR No. 12019  
25

# **EXHIBIT 31**

**FILE**  
San Francisco County Superior Court



NOV 1 - 2017

CLERK OF THE COURT

BY: [Signature]  
Deputy Clerk

SUPERIOR COURT OF CALIFORNIA

COUNTY OF SAN FRANCISCO

TIM POZAR ET AL.,  
Plaintiffs,

vs.

SEAGATE TECHNOLOGY LLC ET AL.,  
Defendants.

Case No. CGC – 15-547787

**ORDER GRANTING IN PART  
PLAINTIFFS' MOTION FOR CLASS  
CERTIFICATION**

Plaintiffs Tim Pozar and Scott Nalick seek certification of a class action against Seagate Technology LLC. They claim: Seagate violated (1) the Song-Beverly Consumer Warranty Act because it breached the implied warranty of merchantability in connection with its ST3000DM001 hard disk drives (the Drives); (2) the “fraudulent” prong of the Unfair Competition Law (UCL) through its representations of the Drives’ reliability and its omissions regarding the Drives’ failure rates; (3) the Consumer Legal Remedies Act (CLRA), primarily by concealing the Drive’s failure rates; (4) the “unfair” prong of the UCL; and (5) the “unlawful” prong of the UCL based on its Song-Beverly Act and CLRA violations.

Plaintiffs propose the following class definition: “All citizens of California who purchased a Seagate hard disk drive with model number ST3000DM001, or who purchased an external drive that contained an ST3000DM001 drive, on or after September 4, 2011.” *Id.* 9. Plaintiffs also seek certification of a “Consumer Subclass:” “All Class Members who purchased a Seagate ST3000DM001 hard disk drive for personal, family, or household purposes.” *Id.* at 10.

I heard the certification motion August 9, 2017. I continued the matter for the submission of supplemental filings, and heard final argument October 31, 2017. In the Conclusion I set a case management conference.

### **Evidentiary Issues**

#### **(1) Amended Schubert Declaration**

##### **(a) Portions of ¶¶ 7-8**

Objections are immaterial because numerosity is uncontested. Seagate Supp. Brief, 96.

##### **(b) Exhibit 1 – objection overruled**

Seagate has now admitted that Exhibit 1 is “genuine.” Schubert Supp. Decl., Ex. 9 at 4:6. In its supplemental brief, Seagate argues that the document is inadmissible because its statements are not based on personal knowledge and are hearsay. The emails were sent by Seagate employees from their Seagate email accounts. They are not hearsay when offered against Seagate. *See* Evid. Code § 1220. Second, the email in question on its face seems to recount a statement of the employee’s personal knowledge. While that employee has distanced herself from that testimony and implicate another Seagate employee, this does not render the testimony inadmissible, although as indicated below it does severely weaken the value of the evidence.

##### **(c) Exhibit 2**

This exhibit was withdrawn. Although Plaintiffs respond to the objections to the exhibit in their supplemental filing, the exhibit should not be considered.<sup>1</sup>

##### **(d) Exhibit 3- objection overruled**

Seagate has now admitted that Exhibit 3 is “genuine.” Schubert Supp. Decl., Ex. 9 at 4:17-19. Seagate argues that the document remains inadmissible because the Seagate employee

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<sup>1</sup> In some instances, Plaintiffs correctly recognize the exhibits that they have withdrawn. In others, they do not.

1 who wrote the email has subsequently stated at deposition that she was recounting what she was  
2 told, such that the information is beyond her personal knowledge. Seagate Supp. Brief, 46. The  
3 statement in the email, that “this drive is truly an issue,” may be based on the writer’s knowledge  
4 based on other emails to which she was a party discussing how to handle the situation related to  
5 the Drive. Her explanation at deposition goes to the weight to be afforded to her email.  
6

7 (e) Exhibit 8- objection overruled

8 Seagate has now admitted that Exhibit 8 is “genuine.” Schubert Supp. Decl., Ex. 9 at  
9 5:2-4. Seagate argues that the document is irrelevant and constitutes hearsay. The hearsay  
10 objection is meritless because the document was sent by a Seagate employee using a Seagate  
11 email account. Plaintiffs argue that a sentence in the email constitutes an admission that the  
12 drives analyzed by Backblaze failed due to issues with the drives. While this reading of the  
13 document is tenuous, it is not such a deviation from the document itself that the document  
14 requires additional foundation to establish its relevance. Schubert Supp. Decl. ¶ 18  
15 (summarizing discovery responses tying “Grenada” name to Drives at issue). However, again,  
16 the content of the exhibit is vague and of practically little value.  
17

18 (f) Exhibits 9-10

19 These exhibits were withdrawn. Although Plaintiffs respond to the objections to the  
20 exhibits in their supplemental filing, the exhibits should not be considered.<sup>2</sup>  
21

22 (g) Exhibits 11-12 -- Sustain.

23 Seagate has now admitted that Exhibits 11-12 are “genuine.” Schubert Supp. Decl., Ex. 9  
24 at 5:15-17, 5:25. Plaintiff asserts, and Seagate does not dispute, that Exhibit 12 is an email  
25 demonstrating the date and authorship of the PowerPoint slide in Exhibit 11, which was attached  
26 to the email. Seagate Supp. Brief, 58. But the PowerPoint has no present relevance – it refers to  
27

---

<sup>2</sup> See note 1.

1 failure rates of Seagate's products in general terms. Amended Schubert Decl., Ex. 11. The  
2 limited excerpts from the author's deposition do not shed greater light on the import of this  
3 report. Schubert Supp. Decl., Ex. 6 at 190:6-20. Importantly, Plaintiffs have not presented any  
4 evidence tying the failure rates discussed in the PowerPoint to the Drives at issue in this  
5 litigation.  
6

7 (h) Exhibit 13 -- objection overruled

8 Seagate has now admitted that Exhibit 13 is "genuine." Schubert Supp. Decl., Ex. 9 at  
9 6:9-11. The statement that "Grenada is the highest volume by far" is relevant to indicate that  
10 "Grenada" was the largest source of failures in the "daily report on the 90 day inventory of  
11 failures." Amended Schubert Decl., Ex. 13. The "Grenada" products are at issue in this action.  
12 Schubert Supp. Decl., Ex. 10. Seagate's arguments as to the meaning of the document only go to  
13 the weight to be given to the evidence. Seagate Supp. Brief, 59 (arguing that it is not clear  
14 whether the reference to "Grenada" drives is limited to the drives in this litigation and that the  
15 use of the phrase "not stable" in the email had nothing to do with defects in the drive, but  
16 statistical sample sizes).  
17

18 (i) Exhibits 14, 17 (smaller excerpt from same email)-- Overruled.

19 Seagate has now admitted that Exhibits 14 and 17 are "genuine." Schubert Supp. Decl.,  
20 Ex. 9 at 6:22-24, 8:1-3. Plaintiffs have now submitted evidence that certain "Grenada" products  
21 are at issue in this action. Schubert Supp. Decl., Ex. 10. While Seagate argues that only a subset  
22 of 3 TB drives are within the scope of this action, issues with 3 TB drives are clearly discussed in  
23 the email. Amended Schubert Decl., Ex. 14 at SEAG0010383. Seagate's arguments undermine  
24 the persuasive power of the email as an admission of latent defects in the Drives at issue in this  
25 action, but they do not entirely destroy the relevance of the document. The only portion of the  
26  
27

1 email that clearly relates a statement by someone outside of Seagate is the reference to a “claim”  
2 of a failure rate over 30%. (Nevertheless, this email would not be read as an admission that  
3 “Grenada Classic” had a failure rate of over 30%.)

4 (j) Exhibits 15-16, 18-21

5 These exhibits were withdrawn. Although Plaintiffs respond to the objections to the  
6 exhibits in their supplemental filing, the exhibits are not considered.<sup>3</sup>

7 (k) Exhibit 22--Sustain.

8 Seagate objected to Plaintiffs’ request to admit the authenticity of this document.  
9 Schubert Supp. Decl., Ex. 9 at 9:12-18. Plaintiffs’ evidence does not authenticate the document  
10 (Schubert Supp. Decl., Ex. 5 at 57:10-18) and Plaintiffs’ Counsel does not have the personal  
11 knowledge to do so.

12 (l) Exhibit 23--Sustain.

13 Plaintiffs obtained evidence from Backblaze that is sufficient to address the objection to  
14 the foundation for the Backblaze email chain contained in Exhibit 23. Seagate Supp. Brief, 74-  
15 75. But the email is inadmissible hearsay. First, Plaintiffs argue that the evidence is not offered  
16 for the truth of the matter asserted. *Id.* at 73. The material portions of the email are the  
17 representations that Seagate 3TB drives “are failing” and that “Drive Savers has confirmed this is  
18 bigger than just us.” Amended Schubert Decl., Ex. 23. These points would be material now to  
19 the extent that they establish that this email is admissible evidence of widespread failures among  
20 the Drives. To serve that purpose, it must be admissible for the truth of the matters asserted.  
21 Second, Plaintiffs argue that the email is a business record. Even if considered, the inadmissible  
22 Budman Declaration at ¶ 15 does not suffice – if accepted any work email on any subject would  
23

24  
25  
26  
27  

---

<sup>3</sup> See note 1.



1 be an admissible business record. For instance, there is no testimony regarding how the email  
2 was prepared. Evid. Code § 1271(c).

3 (m) Exhibit 25--Sustain.

4  
5 Plaintiffs obtained evidence from Backblaze sufficient to address the objection to the  
6 foundation for the Backblaze email chain contained in Exhibit 23. *See* Seagate Supp. Brief, 76.  
7 Nevertheless, the email is inadmissible hearsay. First, Plaintiffs argue that the evidence is not  
8 offered for the truth of the matter asserted. *Id.* at 75. The material portion of the email is that  
9 DriveSavers told a Backblaze employee that DriveSavers rated the unspecified drive model  
10 addressed in the email 15% lower recoverability than is standard for Seagate drives. Amended  
11 Schubert Decl., Ex. 25. These points would be material now to the extent they establish that this  
12 email may be admissible evidence of widespread failures among the Drives. To serve that  
13 purpose, it must be admissible for the truth of the matters asserted. Second, plaintiffs argue that  
14 the email is admissible as a business record. Assuming that were the case, the email recounts an  
15 out of court by DriveSavers, for which plaintiffs have not offered any hearsay exception. (In any  
16 event, the email is too general to be useful in this motion.)

17  
18 (n) Exhibit 26

19  
20 This exhibit was withdrawn. Although plaintiffs respond to the objections to the exhibit  
21 in their supplemental filing, the exhibit is not considered.<sup>4</sup>

22 (o) Exhibit 27-- Sustain.

23  
24 Seagate has now admitted that Exhibit 27 is "genuine." Schubert Supp. Decl., Ex. 9 at  
25 10:8-10. Nevertheless, the contents of the document are inadmissible hearsay. First, plaintiffs  
26 argue that the statements are not hearsay because they are not introduced to prove the truth of the  
27 matter asserted. Seagate Supp. Brief, 80. On its face, this Seagate document recounts what

---

<sup>4</sup> See note 1.

1 “Shutterfly reported” and what “Shutterfly estimated” regarding failure rates of Grenada BP 3TB  
2 drives and the cause of those failures – mechanical drive issues. *See* Amended Schubert Decl.,  
3 Ex. 27. These points would be material now only to extent they establish this email is admissible  
4 evidence of widespread failures among the Drives or the cause of Drive failures. To serve that  
5 purpose, it must be admissible for the truth of the matters asserted. Second, Plaintiffs argue that  
6 the statements are admissible as adoptive admissions. Evid. Code § 1221. The highly redacted  
7 document presented contains only two sentences reciting Shutterfly’s findings in a section  
8 entitled “Study Introduction.” Nothing indicates the unidentified author intended to adopt as true  
9 the factual representations made by Shutterfly. *People v. Hayes*, 21 Cal.4th 1211, 1258 (1999)  
10 (mere recital or description of another’s statement does not necessarily constitute adoption of it).  
11

12  
13 (p) Exhibits 28-31

14 These exhibits were withdrawn.

15 (q) Exhibit 32--Sustain.

16 Plaintiffs argue that Seagate has admitted the authenticity of this email, but cite to a  
17 different Bates-numbered page. *Compare* Seagate’s Supp. Brief, 87 (referring to  
18 SEAG0002617); *with* Amended Schubert Decl., Ex. 32 (SEAG0007963). Seagate did admit that  
19 the email was genuine. Schubert Supp. Decl., Ex. 9 at 12:4-6. But Seagate stands by its  
20 foundation/relevance objection on the basis that it is not clear that the email relates to the Drives  
21 at issue in this case. Seagate Supp. Brief, 88-89. This is correct: the email does not provide a  
22 basis for concluding that the Drives that are the subject of this litigation are discussed in the  
23 email. In their briefing, Plaintiffs rely, without citation, on a quote that is nowhere in the  
24 document. Seagate Supp. Brief, 88:14-15.  
25

26 (r) Exhibit 33  
27

1 This exhibit was withdrawn.

2 (s) Exhibit 34--Overruled.

3 Seagate has now admitted that Exhibit 34 is "genuine." Schubert Supp. Decl., Ex. 9 at  
4 12:22-24. Seagate argues that Plaintiffs have not submitted sufficient evidence to establish a  
5 foundation for the relevance of the email. Seagate Supp. Brief, 92-93. But Plaintiffs have.  
6 Seagate's discovery responses reflect that the "Grenada" and "Grenada BP" are at issue in this  
7 litigation. Schubert Supp. Decl., Ex. 10 at 2. Seagate also argues that the statements are  
8 inadmissible hearsay. But this is an internal Seagate email stating what "We know" regarding  
9 return rates for Grenada drives relative to other drives based on "Standard OEM field data." On  
10 its face, this is a party admission that adopts the Standard OEM field data as true. Evid. Code §§  
11 1220-1221.  
12

13  
14 (t) Exhibit 35 --Overruled, admitted only for a limited purpose and not for the truth of the  
15 matter asserted.

16 Seagate has now admitted that Exhibit 35 is "genuine." Schubert Supp. Decl., Ex. 9 at  
17 13:6-8. But the email is, on its face, an email from an Amazon.com employee to several Seagate  
18 employees. Plaintiffs argue that it is not submitted for the truth, but to show that customers  
19 complained about the drives and that Seagate was aware of such complaints. To the extent  
20 Seagate's knowledge of customer complaints may be relevant, the email may be considered. But  
21 to the extent this is proposed evidence of the existence of customer complaints, it is inadmissible  
22 hearsay. There is no evidence that Seagate adopted the specific statements made in this email  
23 and the statement that "We have multiple customer complaints..." is offered for the truth of the  
24 matter asserted.  
25

26 (u) Exhibit 41  
27

Seagate withdraws its objection because it does not contest numerosity. Seagate Supp. Brief, 96.

## (2) Coughlin Declaration

### (a) Exhibits B-C -- Sustain in part

These are blog posts from Backblaze are inadmissible hearsay if offered for the truth of the matter asserted, otherwise largely irrelevant. At best, the blog posts are relevant to provide context for internal Seagate emails that discuss the Backblaze blog posts. They are admitted for that purpose alone. Coughlin laid a general foundation identifying the documents as such.<sup>5</sup> The blog posts discuss the expected failure rate of hard drives and the specific failure rate of Seagate's hard drives at issue in the present case. To serve as common evidence that Backblaze's drives had unexpectedly high failure rates or at least suggest that common evidence of such fact can be obtained because the fact is true they would have to admitted for their truth. Seagate's Supp. Brief, 30, 34 (Plaintiffs sole argument for the relevance of the blog posts is their tendency to prove the failure rate of the Drives).<sup>6</sup>

Plaintiffs have not established the existence of a hearsay exception that would make the blog posts admissible. Plaintiffs rely on the business records exception. Evid. Code § 1271; Seagate's Supp. Brief, 29, 33-34; Budman Decl. ¶¶ 5-13. Plaintiffs' argument fails because it

<sup>5</sup> Although Plaintiffs state that the Court previously took judicial notice of the blog posts, Plaintiffs fail to observe that the Court did not take judicial notice of the truth of any statements in the blog posts. See Order Overruling Demurrers of Seagate Technology, 2-3. That order has no bearing on the present dispute.

<sup>6</sup> Plaintiffs argue that the "submit factual evidence of Drive failure rates, latent defects, and complaints only to show the types of common evidence that would predominate at a class trial" and not for the truth of the matter asserted. See Plaintiff's Supp. Brief, 4. This does not evade the objection. While Plaintiffs are correct that they do not need to prove the merits of their case at class certification, Plaintiffs are required to submit substantial evidence showing that they will be able to prove their claims by common evidence at trial. A court's ruling unsupported by substantial evidence cannot stand. *Am. Honda Motor Co. v. Superior Court*, 199 Cal.App.4th 1367, 1372 (2011) (*Honda*). The blog posts can only serve, at least in isolation, as proof that common evidence exists if they are admissible for the truth of the matter asserted. If they are inadmissible, they are not common evidence on which Plaintiffs may rely at trial.

1 depends on the Budman Declaration, which is inadmissible for want of a proper attestation. *See*  
2 C.C.P. § 2015.5.

3 Even if considered, the evidence submitted does not demonstrate that the blog posts fall  
4 within the business records exception. The first blog post states Backblaze's findings the stated  
5 topic "How long do disk drives last?" over the course of five years of observations. Coughlin  
6 Decl., Ex. B. The second discusses the rate at which Seagate Drives used by Backblaze failed  
7 over the course of more than three years. *Id.* at Ex. C. Neither is a contemporaneous record of an  
8 act, condition, or event – both are recitations of extemporaneous analyses of events, Drive  
9 failures, that occurred over the preceding years. *Reisman v. Los Angeles School Dist.*, 123  
10 Cal.App.2d 493, 503 (1954) (report made two years and two months after accident was not made  
11 "at or near the time of the act, condition or event"); *People v. Reyes*, 12 Cal.3d 486, 503 (1974)  
12 (opinion's stated in business records are not acts, conditions, or events within the scope of the  
13 hearsay exception).

14 However, the blog posts do have some relevance to provide context for certain Seagate  
15 internal emails that are admissible. *See, e.g.*, Amended Schubert Decl., Ex. 1. The blog posts  
16 are admitted for that limited purpose.

17 (b) ¶ 17—Sustain. In any event, this paragraph has little to no weight.

18 The thrust of the testimony is that, based on the documents Coughlin reviewed, his  
19 opinion is that there is "significant evidence" of a quality problem with the Drives that resulted  
20 in higher failure rates than advertised. Coughlin Decl. ¶ 17. Accordingly, the purpose of this  
21 paragraph is to relate as true case-specific facts derived from the records Coughlin reviewed.  
22 Coughlin may only do so if the facts are independently proven by competent evidence or are  
23 covered by a hearsay exception. *See Dep't of Fish & Game v. Superior Court*, 197 Cal.App.4th  
24  
25  
26  
27

1 1323, 1351 (2011) (at certification, expert opinion must be examined to determine whether it is  
2 supported by the record); *People v. Sanchez*, 63 Cal.4th 665, 686 (2016). Coughlin identifies a  
3 handful of documents on which he relies: The Backblaze blog posts and a handful of documents  
4 produced in discovery. Coughlin Decl. ¶¶ 14, 18-19, 21; *see also* Seagate Supp. Brief, 7  
5 (confirming that Coughlin cited the materials on which his opinion was based and did not rely on  
6 uncited materials). Some, but not all, of the documents Coughlin relied on are admissible.  
7 Amended Schubert Decl., Exs. 1, 8, 14, 17. As a result that the opinion set forth in this  
8 paragraph is based in part on inadmissible hearsay. Importantly, the documents that are  
9 admissible for the truth of the matter asserted constitute nothing more than emails. Coughlin's  
10 opinion is not useful to aid the trier of fact in interpreting the admissible emails. Amended  
11 Schubert Decl., Exs. 1, 8, 14, 17. However, this objection was not made. Seagate Supp. Brief, 5  
12 (objecting that this is an improper expert opinion because it is predicated on hearsay).  
13 (c) ¶ 18--Sustain.

14  
15  
16 The paragraph at issue recounts failure rates experienced by Backblaze and Shutterfly,  
17 Backblaze's findings, and Seagate's internal findings. Only one of the documents Coughlin  
18 cited to support his assertions is admissible. *See* Coughlin Decl. ¶ 18; Amended Schubert Decl.,  
19 Ex. 8. It does not support the conclusions set forth in the paragraph.<sup>7</sup> Accordingly, the hearsay  
20 objections are sustained.

21  
22 (d) ¶ 19-- Sustain.

23 The opinions here relate to OEM return rates. While some portions of the cited  
24 documents are in the record as Exhibits 1 and 22 to the Amended Schubert Declaration, Exhibit  
25

26  
27 <sup>7</sup> Plaintiffs argue that Exhibit 34 to the Amended Schubert Declaration is identical to one of the documents  
referenced by Coughlin. Seagate Supp. Brief, 11. On its face, that document references Standard OEM field data  
regarding return rates. It does not support Coughlin's conclusions in ¶ 18.

22 is inadmissible and in any event neither exhibit supports Coughlin's assertions. Notably, the return rate set forth in Exhibit 22 has been redacted prior to filing.

(e) ¶ 20—Sustained.

Coughlin recounts general facts (the occurrence of “catastrophic floods in Thailand” and a resulting reduction in the worldwide capacity for hard drive production) that putatively tend to provide a reason to expect increasing failure rates in Seagate's Drives. There is no demonstrated logic, but only implied speculation, linking the premise of the floods and defects in the Drives. Compare *Taylor v. Trimble*, 13 Cal. App. 5th 934, 945 n.15 (2017) (expert opinion that does not contain a reasoned explanation illuminating why the facts have convinced the expert need not be relied on). Finally, the reference to Seagate's quality control problems in ¶ 20 are not admissible (see ruling on ¶ 17), making this entire paragraph useless.

(f) ¶ 21 -- Sustain in part (as to opinion regarding defective disk components in Seagate drives) and overrule in part (as to opinion regarding documents suggesting head contamination issues).

Coughlin opines that, based on his review of the documents provided to him, the Drives may have had some specified, and potentially other unspecified, quality issues. The thrust of Seagate's objection is that there is no record to support Coughlin's conclusions. There is one document in the record to loosely support Coughlin's conclusion that the documents reflect some unknown number of Seagate's drives contained head contamination issues. Amended Schubert Decl., Ex. 17. There are no documents in the record to support Coughlin's conclusions regarding defective disk components. The balance of the cited paragraphs contain only general information about possible sources of defects in hard drives. The objection is sustained only to the case-specific opinion regarding defective disk components in Seagate Drives. The opinion



1 regarding head contamination should be given the weight to which it is entitled based on the  
2 underlying documentation, which is only that some contamination may exists on some drives.  
3 (g) ¶ 22—Sustain. In any event, the assertion of “higher” failure rates in Seagate’s Drives has no  
4 weight.  
5

6 In this paragraph, Coughlin tenders his central opinion – based on the “higher” failure  
7 rates of Seagate’s Drives, the Drives were not of the same quality as those HDDs generally  
8 acceptable in the industry and were not suitable for the ordinary consumer use of data storage  
9 and backup of a user’s files. As with the conclusions in ¶ 17, the assertion regarding “higher”  
10 failure rates in the Drives has insufficient support in the admissible evidence. The opinion is  
11 also not useful, and so inadmissible, because it is unclear what “higher,” a relative term, means,  
12 that is, as in ¶ 20 (last sentence) one cannot tell what the rate is compared to, and it appears to be  
13 based, in significant part, on evidence which is not admissible, such as the BackBlaze and  
14 Shutterfly work, and an Apple return rate (see e.g., ¶¶ 18, 19). The statement regarding ordinary  
15 consumers is a legal conclusion, or, if not, it is an unsupported factual assertion. The Declaration  
16 does not indicate where it was signed, and thus may not comply with C.C.P. § 2015.5. However,  
17 I do not disregard it for that reason, because its Ex. A strongly suggests the declarant is located in  
18 the state of California and so signed the declaration here.  
19

20  
21 **(3) Bergmark Declaration--** Sustain as to ¶ 16, otherwise overrule.

22 Bergmark is a partner at an economic and accounting services firm who has experience  
23 performing damages analyses. *See* Bergmark Decl. ¶¶ 2-3. He outlines various ways that class-  
24 wide damages could be computed. *Id.* at ¶¶ 11-18. He has not obtained sufficient data to  
25 compute damages or attempted any computations. His declaration is generally admissible.  
26  
27



1 However with respect to ¶ 16 Bergmark opines that a survey can be completed to assess the true  
2 value of the Drives. Bergmark does not have expertise to offer this opinion on the facts of this  
3 case – he simply refers to discussions with survey experts in other matters where surveys have  
4 been completed. Paragraph 16 is not admissible.  
5

## 6 7 **Underlying Law**

### 8 **1. Certification under the CLRA**

9 The CLRA has its own version of class action requirements: (1) the impracticability of  
10 bringing all members of the class before the court; (2) questions of law or fact common to the  
11 class are substantially similar and predominate over the questions affecting the individual  
12 members; (3) the claims of the class representative are typical of the class; and (4) the class  
13 representatives will fairly and adequately protect the interests of the class. *Thompson v.*  
14 *Automobile Club of S. Cal.*, 217 Cal.App.4th 719, 727-28 (2013).  
15

16 The CLRA requirements are similar to those of C.C.P. § 382. In both cases, the potential  
17 class must be sufficiently numerous as to make individual adjudication impractical, although the  
18 CLRA does not explicitly require an ascertainable class. *Id.* at 728. Both CLRA and non-CLRA  
19 class actions require ascertainability. *In re Vioxx Class Cases*, 180 Cal.App.4th at 128 n.12. The  
20 CLRA includes three requirements that are essentially the same as the community of interest  
21 requirement under § 382. *Thompson*, 217 Cal.App.4th at 728. The CLRA differs from § 382 in  
22 that there is no “superiority” requirement. *Id.* And unlike § 382, a court must certify if all of the  
23 requirements of the CLRA are met. *Id.* at 728 n.2. However, courts retain considerable latitude in  
24 determining whether the four requirements are met. *Id.*  
25  
26  
27

## 2. The Song-Beverly Act

With some exceptions, “every sale of consumer goods that are sold at retail in this state shall be accompanied by the manufacturer’s and the retail seller’s implied warranty that the goods are merchantable.” C.C. § 1792. An “implied warranty of merchantability” means, *inter alia*, that the goods (1) “[p]ass without objection in the trade under the contract description,” (2) “[a]re fit for the ordinary purposes for which such goods are used,” and (3) “[c]onform to the promises or affirmations of fact made on the container or label.” C.C. § 1791.1(a); *Mexia v. Rinker Boat Co.*, 174 Cal.App.4th 1297, 1303 (2009). The core test for merchantability is fitness for the ordinary purpose for which such goods are used. *Mexia*, 174 Cal.App.4th at 1303. That fitness is shown if the product is in safe condition and substantially free of defects. *Id.*

The implied warranty of merchantability may be breached by a latent defect undiscoverable at the time of sale. *Mexia*, 174 Cal.App.4th at 1304. In such cases the implied warranty is breached, by the existence of the unseen defect, not by its subsequent discovery. *Id.* at 1305.

To be subject to the Song-Beverly Act, the sale must occur in California. *See* C.C. § 1792. A sale occurs in California where title to the product passes in California within the meaning of California Uniform Commercial Code § 2401. *Cal. State Elecs. Ass’n v. Zeos Int’l Ltd.*, 41 Cal.App.4th 1270, 1275-77 (1996) (*Zeos*). “Thus, when the parties agree to or contemplate shipment by the seller, title passes to the buyer upon that shipment, unless the agreement specifically requires the seller to make delivery at the destination.” *Id.* at 1276-77.<sup>8</sup>

<sup>8</sup> Plaintiffs contend that the reasoning in *Zeos* does not apply here because that case involved an express warranty under Civil Code § 1793.2, whereas this action involves an implied warranty under Civil Code § 1792. *See* Reply, 6-8. The statutes use different language. *Compare* C.C. § 1792 (“...every sale of consumer goods that are sold at retail in this state”); *with* C.C. § 1793.2(a) (“Every manufacturer of consumer goods sold in this state...”). Both share the term “sold.” “Sale” is subject to a common definition throughout the Song-Beverly Act: Sale “means either of the following: [¶] (1) The passing of title from the seller to the buyer for a price. [¶] (2) A consignment for sale.” C.C. § 1791(n). The *Zeos* Court reasoned that the Song-Beverly Act was only implicated on the facts before

1 Shipment contracts are the presumptive form in California. *Wilson v. Brawn of Cal., Inc.*, 132  
 2 Cal.App.4th 549, 556 (2005).

### 3 3. UCL

4 The UCL defines “unfair competition” as “any unlawful, unfair or fraudulent business act  
 5 or practice and unfair, deceptive, untrue or misleading advertising.” Bus. & Prof. Code § 17200.  
 6 The UCL’s “sweeping” coverage embraces “anything that can properly be called a business  
 7 practice and that at the same time is forbidden by law.” *Cel-Tech Commc’ns, Inc. v. Los Angeles*  
 8 *Cellular Tel. Co.*, 20 Cal.4th 163, 180 (1999) (internal quotations omitted).

9 By proscribing “unlawful” conduct, the UCL borrows rules set out in other laws and  
 10 makes violations of those rules independently actionable. *Zhang v. Superior Court*, 57 Cal.4th  
 11 364, 370 (2013).

12 Fraudulent conduct subject to the UCL is not limited to common law fraud, but only  
 13 requires a showing that members of the public are likely to be deceived. *Day v. AT & T Corp.*,  
 14 63 Cal.App.4th 325, 332 (1998). To establish fraudulent conduct within the meaning of the  
 15 UCL, a plaintiff need not establish that the fraudulent deception was actually false, was known  
 16 by the perpetrator to be false, or was reasonably relied on by a victim who incurred damages. *In*  
 17 *re Tobacco II Cases*, 46 Cal.4th 298, 312 (2009); *see also Fairbanks v. Farmers New World Life*  
 18 *Ins. Co.*, 197 Cal.App.4th 544, 565 (2011) (to be actionable, misrepresentation must be material  
 19 – i.e., a reasonable person would attach importance to its existence or nonexistence in  
 20 determining his or her choice of action in the transaction in question). To determine whether a  
 21

22  
 23  
 24  
 25 if it title passed within the state of California based on: (1) the definition of “sale;” (2) the fact that the defendant  
 26 did not make consignments for sale within California; and, possibly, (3) the fact that Civil Code § 1793.2 imposed  
 27 local warranty service facility requirements whereby such facilities had to be reasonable close to where the “goods  
 are sold.” *Zeos*, 41 Cal.App.4th at 1275. As Plaintiffs argue, the third rationale is inapposite here. *See Reply*, 7.  
 Nevertheless, the common definition and usage of the term “sale” controls the analysis – the statute does not apply  
 to the transactions at issue here unless title passed in California. *See Gusse v. Damon Corp.*, 470 F.Supp.2d 1110,  
 1112-13 (C.D. Cal. 2007).

1 statement is likely to mislead for the purposes of the UCL, courts apply a reasonable consumer  
2 standard. *Hill v. Roll Intern. Corp.*, 195 Cal.App.4th 1295, 1304 (2011).

3 Whether conduct runs afoul of the “unfair” prong may be assessed by one of several tests.  
4  
5 See *Zhang*, 57 Cal.4th at 380 n.9 (collecting cases applying unfairness tests).

6 A UCL plaintiff must have standing. For private plaintiffs, this entails an economic  
7 injury caused by the unfair business practice or false advertising at issue. *Kwikset Corp. v.*  
8 *Superior Court*, 51 Cal.4th 310, 322 (2011). Thus named plaintiffs in fraudulent conduct claims  
9 must show that the misrepresentations were an immediate cause of the injury-causing conduct,  
10 although the plaintiff need not show that the misrepresentations were the sole or even the  
11 decisive cause of the injury inducing conduct. *In re Tobacco II Cases*, 46 Cal.4th at 328. The  
12 plaintiff must prove “actual reliance to satisfy the standing requirement...but...is not required to  
13 necessarily plead and prove individualized reliance on specific misrepresentations or false  
14 statements where...those misrepresentations and false statements were part of an extensive and  
15 long-term advertising campaign.” *Id.*

17 This standing requirement does not extend to putative class members. *Id.* at 326; *Mass.*  
18 *Mutual Life Ins. Co. v. Superior Court*, 97 Cal.App.4th 1282, 1288 (2002); *In re Vioxx Class*  
19 *Cases*, 180 Cal.App.4th 116, 134 n.19 (2009).

21 But relief cannot be secured for absent class members that were never *exposed* to the  
22 alleged unfair business practice, such as advertising that is alleged to violate the “fraudulent”  
23 prong. Compare *Tucker v. Pac. Bell Mobile Servs.*, 208 Cal.App.4th 201, 227 (2012) (UCL does  
24 not authorize an award of injunctive relief and/or restitution on behalf of a consumer who was  
25 never exposed in any way to an allegedly wrongful business practice); *Pfizer Inc. v. Superior*  
26 *Court*, 182 Cal.App.4th 622, 631 (2010) (one who was not exposed to alleged misrepresentations  
27

1 and therefore could not have lost money or property as a result of the unfair competition is not  
2 entitled to restitution); *with Mass. Mutual*, 97 Cal.App.4th at 1286, 1291 (in a case predicated on  
3 uniform non-disclosures, plaintiffs presented evidence that the defendant withheld from its  
4 customers and agents its view of the amount of the discretionary dividend it was paying; a trier  
5 of fact could find defendant's recognition that its dividend rate was excessive would have been  
6 important to prospective purchasers and that defendant's failure to disclose its own conclusions  
7 was misleading, which would in turn support a restitution order under the UCL); *Fairbanks*, 197  
8 Cal.App.4th at 563 (factually distinguishing *Mass Mutual* where uniformity of the defendant's  
9 business practice was in issue).

#### 11 4. CLRA

12 The CLRA proscribes specified "unfair methods of competition and unfair or deceptive  
13 acts or practices undertaken by any person in a transaction intended to result or which results in  
14 the sale or lease of goods or services to any consumer." C.C. § 1770(a). "Any consumer who  
15 suffers any damage as a result of the use or employment by any person of a method, act, or  
16 practice declared to be unlawful by Section 1770 may bring an action against the person to  
17 recover or obtain" actual damages, injunctive relief, restitution, and/or punitive damages, as  
18 specified. C.C. § 1780(a).

19 CLRA plaintiffs must show that a defendant's conduct was deceptive and that the  
20 deception caused them harm. *Tucker*, 208 Cal.App.4th at 222, *citing Mass. Mutual*, 97  
21 Cal.App.4th at 1292. Under *Tucker*, an inference of class wide reliance may be shown by proof  
22 of material misrepresentations made to the entire class (because a representation is material when  
23 it induces the consumer to alter his position to his detriment). *Tucker*, 208 Cal.App.4th at 222.  
24  
25  
26  
27

1 But if the issue of materiality or reliance may vary from consumer to consumer, the action  
2 should not be certified. *Id.*

3 Materiality is determined using an objective standard. *Fairbanks*, 197 Cal.App.4th at 565.  
4 The test is whether a reasonable person would attach importance to the existence or nonexistence  
5 of the misrepresentation in connection with the transaction. *Id.* But individual issues may arise  
6 where two options differ in a variety of ways such that materiality depends on individual  
7 consumer needs or preferences. See *id.* at 565; *In re Vioxx Cases*, 180 Cal.App.4th at 126.  
8  
9

### 10 **Certification**

#### 11 **1. Numerosity and Ascertainability**

##### 12 **A. Song-Beverly Act**

13 Seagate has not disputed that the class definitions use objective characteristics that will  
14 identify numerous individuals. Seagate does contend that the class definitions are overbroad for  
15 the purposes of the Song-Beverly Act because they include all “citizens” of California, as  
16 opposed to purchasers wherein title transferred in California. Seagate asserts that this  
17 overbreadth precludes certification, because the appropriate class to whom Seagate could be  
18 liable includes only an unidentifiable group of individuals to whom title for the Drive passed in  
19 California.  
20  
21

22 The reach of the Song-Beverly Act is limited, at least outside of a consignment for sale,  
23 to transactions where title passes in California. To the extent the class definition sweeps in  
24 individuals who purchased the Drives from retailers pursuant to shipment contracts where the  
25 place of shipment was outside of California, and to the extent that California citizens purchased  
26 the Drives from retailers pursuant to delivery contracts where the specified place of delivery was  
27

1 outside of California, it is overbroad. *Zeos*, 41 Cal.App.4th at 1277. Furthermore, the class  
2 definition is overbroad because it may include California citizens that purchased Drives from  
3 brick-and-mortar stores outside of California.

4  
5 Plaintiffs propose a Song-Beverly Act subclass in their Reply: “All Class members who  
6 purchased at retail in California.” Reply, 8 n.7. Plaintiffs contend that this proposed sub-class is  
7 ascertainable because it is defined by objective criteria that can be used to determine class  
8 membership. *Id.* Plaintiffs’ Counsel declares that his firm is working with federal plaintiffs to  
9 obtain customer records to identify individuals who purchased Drives from third parties.  
10 Schubert Reply Decl. ¶ 3. Seagate counters that ascertainability is impossible because there will  
11 need to be an individualized inquiry into (i) the identity of the retailer; (ii) the location of the  
12 retailer; and (iii) the terms of the transaction.

13  
14 For ascertainability purposes, the narrowed definition proposed by plaintiffs might  
15 suffice. The definition relies on objective criteria within the possession of individual consumers,  
16 whether or not plaintiffs will be successful in obtaining the identities of purchasers through third-  
17 party retailers. The material criteria identified by Seagate – the identity of the retailer and the  
18 terms of the transaction – are objective and within the knowledge of putative class members.

19  
20 Seagate’s challenge touches on issues of predominance and manageability – whether  
21 there is an effective means of culling individuals who are not, by definition, members of the class  
22 because they purchased from out-of-state online retailers for whom title did not pass in  
23 California under the terms of the contract. That is taken up separately.

24 **B. UCL and CLRA**

25  
26 There is no dispute that the individuals who meet the objective characteristics of the class  
27 definition, and the Consumer Subclass definition, are identifiable. Amended Schubert Decl. ¶¶



1 5-6, Ex. 40 (Seagate possesses names and external model numbers specified products that  
2 contain the drives). In addition, the class definition uses objective transactional criteria sufficient  
3 for individuals who fit the definition to identify themselves. Moreover, there is no dispute that  
4 these individuals are numerous. Amended Schubert Decl. ¶ 7-8, Ex. 41. Setting aside Seagate's  
5 predominance arguments, addressed separately, Seagate does not argue that the class definition is  
6 overbroad with respect to the UCL<sup>9</sup> and/or CLRA claims.

7  
8 Nevertheless the class definition is overbroad. It applies to all purchases made by  
9 California citizens even if those purchases were made wholly out-of-state. The class definition is  
10 also under-inclusive to the extent individuals who purchased products in California are not  
11 citizens of California. *See, e.g., Sullivan v. Oracle Corp.*, 51 Cal.4th 1191, 1206-09 (2011) (out-  
12 of-state plaintiffs suing California-based employer for Fair Labor Standards Act violations  
13 occurring outside of California cannot bring UCL claim predicated on those FLSA violations).

14  
15 To the extent there are defects in the class definition, they may be addressed by revising  
16 the definition, such as to include only purchases made in California.

17 **2. Commonality/Predominance/Superiority**

18 As noted above, the superiority element does not apply to the CLRA claim. For the  
19 purposes of C.C.P. § 382, class actions are meant to be superior to alternate means for a fair and  
20 efficient adjudication of the litigation in that they must provide substantial benefits to both the  
21 courts and the litigants. *Sav-On Drug Stores, Inc. v. Superior Court*, 34 Cal.4th 319, 332 (2004),  
22 citing *Washington Mutual Bank, FA v. Superior Court*, 24 Cal.4th 906, 914 (2001).

23  
24 **A. Song-Beverly Act**

25  
26  
27 <sup>9</sup> At least to the extent the UCL claim is not predicated on a violation of the Song-Beverly Act. *See* Opposition, 25  
n.19 (UCL claim predicated on violation of Song-Beverly Act cannot be certified for the same reasons as direct  
Song-Beverly Act claim).



1 The issues identified by the Parties are:<sup>10</sup>

2 (1) Whether title to the Drives passed in California such that the Song-Beverly Act can be  
3 invoked;

4 (2) Whether the Drives contain a latent defect;

5 (3) Whether any defects in the Drives were caused by unreasonable use; and

6 (4) The appropriate remedy and the computation of damages, if any.

7  
8 **i. Location Where Title Passes**

9 In their moving papers, Plaintiffs implicitly assume that that all California citizens may  
10 press claims under the Song-Beverly Act. As noted above, this is incorrect – the Song-Beverly  
11 Act applies only if title passes in California. This creates individualized issues.

12 For purchases occurring in brick-and-mortar stores in California, the location where title  
13 passes is likely a common issue that is not subject to dispute. For purchases from online retailers  
14 or other retailers that ship from within California, the location where title passes is also likely a  
15 common issue not subject to dispute. For purchases from online or other retailers that ship from  
16 outside California, a review of the transactional terms is probably necessary to evaluate whether  
17 title passes in California. The record lacks: (1) information concerning the number of purchases  
18 at brick-and-mortar retailers; (2) information concerning the number of purchases at online  
19 retailers inside and/or outside California; (3) information concerning the total number of retailers  
20 at issue; and, relatedly, (4) information concerning the terms of any online purchases from out-  
21 of-state retailers.<sup>11</sup> Thus the record does not support a conclusion that the location where title

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23  
24  
25  
26 <sup>10</sup> See Motion, 14-15; Opposition, 15-19, 25-27.

27 <sup>11</sup> The Parties appear to agree that there are some third party retailers that may ship from out-of-state. See Opposition, 15 (without citation to evidence); Reply, 6-8 (arguing that such purchases are within the scope of Plaintiffs' claim); Schubert Reply Decl. ¶ 3 (referring to discovery efforts related to "some online merchants such as Amazon.com").

1 passes is common. Assessing whether online purchasers are entitled to recover as members of  
2 the class will require individualized inquiries.<sup>12</sup>

3 **ii. Whether the Drives Contain a Latent Defect**

4 Plaintiffs assert that a jury can conclude that the Drives were unfit for their ordinary use  
5 as consumer data storage based solely on their high failure rates. Motion, 14; *see also* Coughlin  
6 Decl. ¶ 22 (“Due to the higher failure rates of Defendant’s Drives, I believe many of these Drives  
7 were not of the same quality as those HDD’s generally acceptable in the industry and were not  
8 suitable for ordinary consumer data storage and backup of a user’s files”). This opinion (even  
9 were it admissible) with its use of the word “many,” highlights the critical problems with  
10 certification of this claim.  
11

12 “[T]he party moving for class certification must provide substantial evidence of a defect  
13 that is substantially certain to result in malfunction during the useful life of the product. This is  
14 an issue that must be considered not only to determine the merits of a plaintiff’s claim, but also  
15 in a class certification motion.” *Honda*, 199 Cal.App.4th at 1375.  
16

17 In *Honda*, the plaintiff “presented no evidence that it [was] substantially certain [that the  
18 transmissions in the vehicles belonging to the 18,755 class members who had not experienced  
19 third gear problems] would exhibit third gear problems as required by *Hicks*[ v. *Kaufman and*  
20 *Broad Home Corp.*, 89 Cal.App.4th 908 (2001)].” *Id.* at 1377.  
21

22 *Hicks* held that the plaintiffs could recover for an inherent defect that is substantially  
23 certain to result in a malfunction during the life of the product, whether or not the product is  
24 presently functioning as warranted. 89 Cal.App.4th at 918.  
25  
26

27 <sup>12</sup> Such inquiries may be common for each purchaser from a common retailer. However, this is speculation in the  
absence of evidence.

1 Here, according to plaintiffs' evidence, "hard disk drives are generally designed for a five  
2 to ten year life under specified use conditions. HDDs can last less than or greater than that  
3 period of time, but the design margin for a HDD should result in minimal drive failures during  
4 the design life." Coughlin Decl. ¶ 15. Plaintiffs' produce expert testimony to the effect that  
5 "there was a quality problem with Defendant's Drives, which resulted in high failure rates." *Id.*  
6 at ¶ 18 (ruled above not to be admissible). With circular reasoning, Plaintiffs' expert states,  
7 "Due to the high failure rates of Defendant's Drives, I believe many of these Drives were not of  
8 the same quality as those HDDs generally acceptable in the industry and were not suitable for the  
9 ordinary consumer use of data storage and backup of a user's files." *Id.* at ¶ 22 (ruled above not  
10 to be admissible). The expert declaration regarding high failure rates is only as good as the  
11 underlying evidence. *See Sanchez*, 63 Cal.App.4th at 686.  
12  
13

14 The evidence on which plaintiffs rely to establish the high failure rates is either  
15 inadmissible or inadmissible for the truth of the matter asserted, and the expert opinion here in  
16 fact adds almost nothing to the underlying evidence.

17 I examine the admissible evidence. It is Amended Schubert Decl., Exs. 1 (Seagate  
18 employee's email referring to "contamination issues that caused them to fail much faster and  
19 more" in discussing Backblaze blog post), Ex 3 (Seagate employee's email that drive is "truly an  
20 issue" following Backblaze blog post), Ex 14 (references to cracked boxes during floods and  
21 outgassing/contamination in a Seagate employee's email following the Backblaze blog post);  
22 Reply Schubert Decl., Ex. 1 at 71:4-16. Plaintiffs also submit evidence to support the conclusion  
23 that Seagate was made aware of problems (whatever they were) with the Drives as early as 2012.  
24 Amended Schubert Decl., Ex. 35. Plaintiffs rely on the BackBlaze study (Reply at 2), but that is  
25  
26  
27

1 not admissible—and it certainly is not the sort of study which our Supreme Court had in mind at  
2 this certification stage. Compare, *Duran v. U.S. Bank Nat. Assn.*, 59 Cal. 4th 1, 41–42 (2014).

3 I am not persuaded that this evidence could support a finding that there was a latent  
4 defect in all the Drives—or “substantially all”—the Drives at issue.<sup>13</sup> The fact that the Drives are  
5 ‘an issue’ or that some of them fail ‘much faster and more’ suggests at best that a higher  
6 percentage of these drives fail than the author thinks is proper—for all we know, that means a  
7 fail rate of 1% if the author thinks a reasonable rate is e.g. 0.5%. But plaintiffs’ evidence does  
8 not provide us a way to compare any such numbers (none of which are actually presented in the  
9 evidence, I must note) with a failure rate which some expert contends is reasonable. The  
10 evidence refers to various causes (contamination and outgassing, for example), but none of these  
11 is adopted by the plaintiffs as the latent defect. Indeed, there is no theory of latent defect: that is,  
12 after all the discovery we have had in this case, plaintiffs do not even have a theory as to what  
13 the latent defect is and why the Drives failed. Nor is there any study done, or any study offered  
14 or described, which would provide a statistical analysis of the failure rate. Compare *Duran v.*  
15 *U.S. Bank Nat. Assn.*, 59 Cal. 4th 1, 41–42 (2014).<sup>14</sup> There is no trial plan. In sum, there are only  
16 a few instances of anecdotal evidence, and these do not show that there is common proof that the  
17 Drives as a group were defective or had a latent defect,<sup>15</sup> and plaintiffs suggest no other  
18 admissible evidence to be presented at trial to prove this common issue.  
19  
20  
21

22  
23 <sup>13</sup> The evidence is very weak because, while I have admitted the cited material because it could be read as statements  
24 by people who know the truth, the statements on balance actually seem (to me as fact finder) to report the  
25 conclusions of others.

26 <sup>14</sup> See generally William B. Rubenstein, 3 NEWBERG ON CLASS ACTIONS, Use of expert testimony at the class  
27 certification stage § 7:24 (5th ed. 2017).

<sup>15</sup> Seagate presents evidence that there are a variety of reasons why a hard drive can fail. See Almgren Decl. ¶¶ 4-6  
(describing how hard drives function); Ng Decl. ¶¶ 3-10 (reasons hard drives fail). Further, Seagate presents  
evidence that there is no common cause for the Drives’ failures. See Rollings Decl. ¶ 7; see also Clark Decl. ¶¶ 10-  
11 (stating that prior to April 2015 Seagate had not received an abnormal number of customer complaints directed at  
the Drives that would lead Seagate to believe there was a problem). In addition, Seagate offers evidence calling into  
question the inferences Plaintiffs’ seek to draw from the Backblaze analysis and from Seagate’s internal

1                   **iii. Manageability of Individual Issues and Superiority**

2           There are individual issues with respect to (1) determination of whether online purchasers  
3 are covered by the Song-Beverly Act; and (2) damages.

4           As to the first issue, there has been no showing as to the scope of the issue – i.e., the  
5 number of different online sellers, their physical location, and any differences in their terms of  
6 sale. Nor have plaintiffs demonstrated how these individual issues can be managed.  
7 Accordingly, the motion should be denied in part for want of manageability, although this  
8 problem alone does not justify denial of certification as to purchasers who bought Drives from  
9 brick-and-mortar stores in California.

10           As to the second issue, individual issues as to damages do not generally justify denial of  
11 class certification. *Sav-On*, 34 Cal.4th at 333

12                   **B. UCL – Fraudulent Prong**

13           The issues identified by the Parties are:<sup>16</sup>

14           (1) Whether members of the public were likely to be deceived by Seagate's  
15 representations about the Drives' reliability;

16           (2) Whether members of the public were likely to be deceived by Seagate's failure to  
17 disclose the Drives' failure rates; and

18           (3) The appropriate measure of restitutionary relief, if any.

19                   **i. Affirmative Misrepresentations**

20           Plaintiffs have not presented evidence of: (1) any Seagate advertising; or (2) the identity  
21 of the Seagate retail products within the scope of this action.<sup>17</sup> Accordingly, the record is

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22           communications. *See* Rollings Decl. ¶¶ 4-9 (discussing Seagate's assessment and investigation of Backblaze  
23 report); Ng Decl. ¶ 11 (discussing Apple recall and noting absence of any other recalls); Clark Decl. ¶¶ 12-14  
24 (discussing interpretation of her own internal emails regarding failure rates).

25           <sup>16</sup> *See* Motion, 16; Opposition, 19-27.

1 without evidence to support a finding that common questions predominate as to any affirmative  
 2 misrepresentations. *See, e.g., Fairbanks*, 197 Cal.App.4th at 563-64 (class certification properly  
 3 denied where alleged misrepresentations were not commonly made to members of the class);  
 4 Section III(D), *supra*. No class can be certified as to affirmative misrepresentations.  
 5

## 6 **ii. Omissions**

7 Plaintiffs' theory of liability is as follows: "[P]roof of liability turns on whether the  
 8 average consumer purchasing the Drive would be likely to be deceived by Seagate's  
 9 representations about the Drives' reliability and its omission of the Drives' failure rates.  
 10 Because Seagate uniformly concealed the true failure rates of the Drive – while prominently  
 11 featuring the Drive's reliability on its website, in its marketing, and on its boxes – the Class was  
 12 exposed to the same deceptive course of conduct. In order to prove that Seagate deceived the  
 13 public, Plaintiffs will present evidence that Seagate knowingly concealed the Drive's high failure  
 14 rates – all of which would be common to the Class as a whole." Motion, 16.  
 15

16 Seagate contends that no UCL claim predicated on omissions can be certified because:  
 17 (1) the alleged omissions were not contrary to Seagate's common representations; (2) as a result,  
 18 Seagate was not under a common duty to disclose; and (3) Seagate's knowledge changed over  
 19 time, such that Seagate's knowledge base is not common as to all putative class members.  
 20  
 21 Opposition, 22-25.

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22 <sup>17</sup> Setting aside representations in the briefs, the only evidence of affirmative representations presented by Plaintiffs  
 23 in the moving papers are their vague descriptions of advertising and/or information they obtained from undisclosed  
 24 internet sources and an offhand and unspecific reference from their expert. *See* Amended Schubert Decl., Ex. 36 at  
 25 86:2-87:13, Ex. 37 at 50:4-24; Coughlin Decl. ¶ 16; Schubert Reply Decl., Ex. 2 at 51:2-51:17, 54:14-54:23, Ex. 3 at  
 26 46:21-25. In reply, Plaintiffs submit excerpted deposition testimony in which a Seagate official stated that the  
 27 "marketing message" she wanted to portray to the public about the "BarraCuda" product at an unspecified time  
 period was that it had "the best combination of performance, capacity and reliability." Schubert Reply Decl., Ex. 1  
 at 17:2-17. This testimony lacks sufficient context to be of any use to the class certification analysis. For example,  
 it says nothing about the timing, mode, or specific substance of any marketing. *Compare In re Tobacco II Cases*, 46  
 Cal.4th at 328 (in the context of alleged exposure to a long-term advertising campaign, plaintiff need not plead with  
 an unrealistic degree of specificity that she relied on particular advertisements or statement). It also does not appear  
 to address all products at issue in this motion.

Several courts have held that “a failure to disclose a fact one has no affirmative duty to disclose is [not] ‘likely to deceive’ anyone within the meaning of the UCL.” *See Berryman v. Merit Property Mgmt., Inc.*, 152 Cal.App.4th 1544, 1556-57 (2007) (quoting *Daugherty v. Am. Honda Motor Co., Inc.*, 144 Cal.App.4th 824, 838 (2006)); *Buller v. Sutter Health*, 160 Cal.App.4th 981, 988 (2008); *see also Bardin v. Daimlerchrysler Corp.*, 136 Cal.App.4th 1255, 1275 (2006). That is, there must be some common basis to impose upon Seagate the obligation to disclose any [high] failure rate. However, for that duty to arise, Plaintiffs are not necessarily required to prove that Seagate made contrary representations. *See Collins v. eMachines, Inc.*, 202 Cal.App.4th 249, 255-58 (2011) (plaintiff stated a claim under the UCL “fraud” prong based on the defendant’s alleged knowing active concealment and non-disclosure of a material fact).

To the extent plaintiffs’ press a theory of liability predicated on a duty to disclose arising out of the knowing concealment of some failure rates *arising from latent defects*, they presumably would have present proof of a latent defect, but as noted above, they have not demonstrated that they can do so. However, plaintiffs may be able to demonstrate that whatever the failure rate was—and by definition, there was *some* failure rate, there always is—it was sufficiently high that consumers should have been alerted to it. That presents common issues.<sup>18</sup> And to the extent *Daugherty v. Am. Honda Motor Co.* blocks the claims, the issue is common.

Seagate’s knowledge of the failure rate involves common evidence. Any inquiry into Seagate’s knowledge will focus on one entity – Seagate. This will turn primarily on the testimony of Seagate’s officials, internal communications, and other documents available to Seagate. Seagate argues, correctly, that the time when Seagate learned certain facts may be

<sup>18</sup> While implying that the failure rates of Seagate’s drives evidenced in their papers are unreasonably high, Plaintiffs have not clarified the failure rate that a “reasonable consumer” would expect. *See Collins*, 202 al.App.4th at 256, 258 (for deceit to occur, members of the public must have an expectation about the matter in question). Nevertheless, the very nature of the inquiry – the expectations of a reasonable consumer regarding the useful life and failure rate of a consumer hard drive – render the question susceptible to common proof.



1 relevant and may divide the class. Opposition, 24-25. For example, knowledge obtained in 2014  
2 may support a claim by a 2015 purchaser, whereas it is irrelevant to a 2013 purchaser. Even so,  
3 this individual issue can be managed by reference to purchase records should it be determined  
4 that Seagate's knowledge did, in fact, vary over time.<sup>19</sup> Possibly subclass will be required.

5  
6 The "reasonable consumer" test presents a common issue. *McKell v. Washington Mutual,*  
7 *Inc.*, 142 Cal.App.4th 1457, 1471 (2006); *see also Collins*, 202 Cal.App.4th at 256, 258  
8 (applying "reasonable consumer" standard to CLRA claim, and adopting CLRA analysis for  
9 UCL claim). Plaintiffs contend that the global failure rate for the Drives must be accurately  
10 disclosed, else a reasonable consumer will be deceived. Seagate may, for example, put on  
11 evidence that publication of such a rate is itself misleading due to variances in the Drives' failure  
12 rates according to their use or that any failure rate identified by Plaintiffs is improperly inflated  
13 by Drives that were used unreasonably. Nevertheless, this element raises predominant common  
14 questions.  
15

16 On balance the common issues predominate.

17 **iii. Manageability and Superiority**

18 In light of the predominant common questions and the relatively minor individual  
19 inquiries, permitting the UCL claim predicated on omissions to proceed on a class-wide basis is  
20 superior to the alternative of individual litigation. Importantly, the "individual" issues affecting  
21 liability turn primarily on the time at which Seagate was obtained material information and  
22 allegedly began suppressing that information. This is a general issue cutting across many  
23 individual cases, and it is not likely there will be substantial individual evidence. To the extent  
24 that Seagate may put in evidence that failure rates varied by product, such evidence will not  
25  
26  
27

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<sup>19</sup> Some of the exhibits date to 2012. *See* Amended Schubert Decl., Exs. 13, 35.



render trial unmanageable. Finally, the individual issues that are likely to arise with respect to damages should not defeat certification. *Sav-On*, 34 Cal.4th at 333.

### C. CLRA

The issues identified by the Parties are:<sup>20</sup>

- (1) Whether members of the public were likely to be deceived by Seagate's failure to disclose the Drives' failure rates;
- (2) Whether the putative class members relied on their erroneous expectations regarding the Drives' failure rates;
- (2) Whether Plaintiffs' omission claims are barred under *Daugherty*; and
- (3) The appropriate measure of restitutionary relief, if any.

The issues relating to the CLRA claim are substantially the same as the issues relating to the UCL claim under the fraudulent prong. *See, e.g., Collins*, 202 Cal.App.4th at 255-59; see Motion, 20 (incorporating UCL discussion into CLRA section); Opposition, 19-27 (generally discussing UCL and CLRA together).

As plaintiffs recognize, the CLRA claim does pose the additional issue of class-wide reliance. Motion, 20; Reply, 15. Plaintiffs state that they will demonstrate class-wide reliance by demonstrating that the reliable function of a hard-drive throughout its useful life is material to a reasonable consumer. Motion, 20. While Plaintiffs have not identified the evidence on which they will rely (Motion, 20), Seagate has not argued that this inquiry presents individual issues. Plaintiffs may be able to rely on the basic function of a hard drive – storage of information for future use – to establish that a reasonable consumer would consider the rate at which the hard drive fails to store information throughout its useful life as material. *See, e.g., Amended Schubert Decl.*, Ex. 37 at 43:22-25, 50:4-22 (describing in general terms that hard drive was

<sup>20</sup> See Motion, 20; Opposition, 19-22, 24-27.

1 marketed for storage of documents and his “outrage[]” when the Drive he purchased lasted only  
2 one year). Accordingly, this additional issue does not change the analysis.

3 The CLRA claim should also be certified.

4 **D. UCL – Unfair Prong**

5  
6 In brief, the parties argue the propriety of certifying the unfair prong as they do the UCL  
7 claims generally. Opposition, 25 n.19; Motion, 15 n.11. The limited argument in the briefs  
8 suggests that the unfair prong will add only common legal questions – whether the course of  
9 conduct addressed under the fraudulent and unlawful prongs also satisfies one of the pertinent  
10 tests for unfairness. Thus it should be certified as well.

11 **E. UCL – Unlawful Prong**

12  
13 The UCL claim predicated on unlawful conduct is, pursuant to the moving papers,  
14 predicated on the “implied warranty of merchantability” – i.e., the claim under the Song-Beverly  
15 Act. Motion, 15 n.11. for reasons stated above in connection with the Song-Beverly Act, this  
16 cannot be certified.

17 **3. Typicality/Adequacy**

18 The typicality element requires that a representative plaintiff have claims that are similar,  
19 although not necessarily identical, to the remainder of the class. *Classen v. Weller*, 145  
20 Cal.App.3d 27, 46 (1983). See *McGhee v. Bank of America*, 60 Cal.App.3d 442, 450 (1976);  
21 *Richmond v. Dart Indus., Inc.*, 29 Cal.3d 462, 470 (1981).

22  
23 Seagate contends that Plaintiffs are inadequate because they did not rely on any  
24 affirmative representations or omissions at issue in this action, such that they do not have  
25 standing to pursue a UCL claim. With respect to omissions, Nalick testified in general terms that  
26 he relied on Seagate’s representations on its packaging that the Drives were reliable. See  
27

1 Schubert Reply Decl., Ex. 2 at 51:2-51:19, 54:1-23. It may be inferred that Nalick would not  
2 have purchased the drive had he known it failed at a high rate. *See also* Siu Decl., Ex. C at 83:7-  
3 13 (discussing his expectation that the Drive would last 5-10 years). Similarly, Pozar testified  
4 that his expectation for the duration of the Drives based on his past experience was substantially  
5 longer than the Drives lasted. *See* Siu Decl., Ex. A at 221:15-222:3. This testimony, too, is  
6 consistent with plaintiffs' theory of relief on the omission claim. Plaintiffs are typical of the  
7 class if they purchased the Drives with the understanding, based on Seagate's omission, that the  
8 Drives would last materially longer than they actually did.

9  
10 Plaintiffs are typical of the CLRA claim and adequate to represent the class to the same  
11 extent that they are typical of the UCL claim and adequate to represent the class with respect to  
12 that claim.

13  
14 Pozar did not purchase a Drive at retail. Rather, his friend purchased a Drive at retail for  
15 use in a shared system and Pozar reimbursed his friend for half of the purchase price. Siu Decl.,  
16 Ex. A at 117:24-121:13. Thus Pozar does not fit within the class definition – which includes  
17 only specified individuals who “purchased a Seagate hard disk drive with model number  
18 ST3000DM001” or “purchased an external drive that contained an ST3000DM001 drive.” He  
19 is atypical for this reason, and cannot be a class representative.

20  
21 There are any adequacy objections to Nalick, aside from the challenges rejected above.

22 Based on their conduct of this litigation and their evidentiary submission, Plaintiffs'  
23 Counsel appear adequate to represent the class. Amended Schubert Decl. ¶ 2, Ex. 43.

1 **Conclusion**

2 The motion to certify is granted in part, limited to CLRA and UCL (but not the illegal  
3 prong) claims based on omissions. The motion is otherwise denied.

4 To the extent there are defects in the class definition, they may be addressed by revising  
5 the definition, such as to include only purchases made in California. It is also possible that now  
6 (or in the future) the nature of the subclasses should be refined. The parties should confer on  
7 these issues before the next case management conference (CMC), as well as whether notice  
8 should issue and the appropriate next steps in this case, in advance of the next CMC, and present  
9 the results in their joint CMC statement. The parties should now ensure all documents lodged  
10 subject to a potential sealing motion are filed in the public file, as no sealing motion was filed.  
11

12 A CMC is set for November 30, 2017 at 3:30 p.m.  
13

14  
15  
16  
17 Dated: November 1, 2017



18 Curtis E.A. Karnow  
19 Judge of The Superior Court  
20  
21  
22  
23  
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26  
27

**CERTIFICATE OF ELECTRONIC SERVICE**  
(CCP 1010.6(6) & CRC 2.260(g))

I, DANIAL LEMIRE, a Deputy Clerk of the Superior Court of the County of San Francisco, certify that I am not a party to the within action.

On **NOV 1 - 2017**, I electronically served THE ATTACHED DOCUMENT via File & ServeXpress on the recipients designated on the Transaction Receipt located on the File & ServeXpress website.

Dated: **NOV 1 - 2017**

T. Michael Yuen, Clerk

By: 

DANIAL LEMIRE, Deputy Clerk